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THE ALTRUISM OF ORGANIZED MEDICINE*

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NEW ORLEANS.

Ever since the days of Hippocrates the institution of organized medicine has carried on its work with steady progress towards scientific perfection, having devotion to the interests of others as its everlasting incentive. Schisms, cults and heresies have come and gone, in apparently tireless, and certainly tiresome procession, through these many ages, but the temple of regular nonsectarian medicine still stands unshaken like the rock of Gibraltar. That an institution can survive the ravages of the past centuries is proof that it is built on a firm foundation with truth and loyalty as its main pillars and altruism its keystone.

It is an indelicate and offensive practice for an individual and even an organization perniciously and persistently to seek self-glorification and praise, assuming as it were a Pharisaical, holier than thou attitude. It is quite another and a defensible, nay, admirable trait to remove doubts and suspicions from one's self even at the expense of exposing one's virtues.

The reserve and conservatism which has always been an earmark of organized medicine has frequently been misunderstood. The finger of suspicion has occasionally been pointed in our direction and an overdeveloped reticence has been slanderously pictured by non-believers as a terrible mask, behind which lurked the black art of mystery, chicanery and deceit.

The remarkable impetus given to medical achievements and organization during the last half century has reawakened public interest and public trust and I venture to say that, in spite of some doleful observations and direful prophesies, never before in the history of human kind, has true scientific medicine had a stronger or more just hold on the sympathies and respect of the people. The names of Jenner, Pasteur, Koch, Lister, Murphy, Carrel and a host of others are the bonds we offer as collateral for a continued public confidence; but we cannot expect to live and prosper as an organization on the interest of these bonds. We have work of our own cut out for us.

There are many projects of an altruistic nature engaging the profession of medicine both collectively and as individuals. We owe it to the public as well as to ourselves, that from time to time information telling of this work must reach the laity, and it is our duty to see that this information is furnished in a safe and sane way, and at the proper time. Quite often, in the public press, and not infrequently in medical journals, news of a misleading, if not incorrect, nature is propagated. The newspapers are not to blame, as most frequently they seize on what they believe to be authentic facts, and in good faith hasten to

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publish them, lest they be "scooped" by a rival paper. With the remarkable facilities now available for the collection and dissemination of news, no battle of New Orleans could wait weeks or even days before its cannon fire would be reverberating around the globe.

Publicity has formerly been a tabooed topic in medical circles and it has been a hard job to wean the profession from its solitary diet of medical pabulum but, with the changing and already muchly changed human psychology, we cannot longer maintain our monkish solitude. We must realize these changes and adapt ourselves to them. We must be more confidential with the public or they will not be more confiding in us.

Education has progressed enormously along medical lines and we must not forget that it has made great strides in other lines including "reading and 'riting and 'rithmetic". In some neighborhoods where, three score years ago the circuit rider performed the office of reading the newspaper for the benefit of the community, whole families are now doing crossword puzzles and answering "ask me another" problem, with pleasure and ease. Radios carry the news to the furthermost hamlets on wings of lightning, and illiteracy is fast disappearing from all parts of the country.

Exercise develops organic activity and growth, and the mental status of the people has reached such a stage that we hope soon that we might truthfully say that this is not merely a civilized nation, it is an educated one.

Education creates an unquenchable desire for more knowledge. This is espely true about medical matters, and this desire must be fulfilled by those most competent and most responsible for doing so—the members of organized medicine. The profession is waking up to the fact that the judicious use of publicity is a powerful instrument for doing good, and this is why some state organizations have created censorship committees whose function it is to look after publicity work.

Though Cordelia's voice was ever soft and low, an excellent thing in woman, it was necessary for some of her modern sisters to raise their voices an octave or more before they became enfranchised, and abolished the harems of Turkey, and otherwise made their influence felt far beyond the wildest dreams of a few decades ago.

It would be easy for us to say it is no more our duty to try to protect humanity against the exploitation of its sick and ailing, by charlatans, than it is the duty of an honest merchant to run to cover all the dishonest peddlers and swindlers, and let it go at that. "Let the galled jade wince, my withers are unwrung." But we feel a higher and more sacred duty, due to the confidence humanity has reposed in us as the guardians of its health, and a faithful few are always ready to respond to every call to protect our sacred charge.

The laity cannot be blamed for its lack of interest in these affairs as they have not been acquainted with the situation. They do not know that the doctors, on account of the disordered state of things medical, which were fraught with discouragement to themselves, and injurious results to their patients, asked the State Legislature to grant them the right of voluntary incorporation, for the purpose of mutual improvement and promotion of the public good. They do not know that a prospective medical student must give evidence of more than a high school education, before he is permitted to take up the study of medicine and that he must take four or five years training in a high class medical school, which is equipped with laboratories, lecture rooms and clinics, and usually one or two years interneship in a standardized hospital, before he faces the State board of medical examiners to qualify as a healer of the sick. Nor can they realize what an arduous task, and how expensive it is, to equip a man or woman for this noble calling, where, however ambitious he or she

might be, or whatever financial or influential backing, he or she might have, quite a few fail to make the grade.

They may know that such blessings as antitoxin for diphtheria, insulin for diabetes, inoculation against hydrophobia, scarlet fever, typhoid fever and so on ad infinitum, do exist, but they do not dream that these discoveries were accomplished through the long and continued blood-sweating labor of some member of the medical profession with no other reward than that obtained from the satisfaction of work well done.

They are blessings like the sunshine or the rain, but like Topsy they had no birth, they just grew. Under ordinary circumstances the profession is content to let the public mind remain in this indifferent state of bliss; but when things have come to such a pass that uneducated men and women can equip themselves within the course of a few weeks, without any preliminary education for matriculation, and with a diploma guaranteed to any aspirant who can pay the fees, to become universal healers of all human ills by manipulating segments of the backbone; or when others claim that all maladies are caused by some misdirected thought and can be cured by merely changing the course of that thought, it is time that the public should be reminded of the truth, and, without doubt, organized medicine is the proper source from which this truth should come.

Scientific medicine does not promote any theory or principle to the exclusion of established facts. It aims by the utilization of all available knowledge, to determine the cause of disease, and then by the use of all intelligent methods to conquer it. It denies that any manipulation of the spine may cure diphtheria or that any manipulation of the mind may correct a broken leg. We advocate massage in cases where it is indicated and we use suggestions where troubled minds may be eased and imaginary ills dispelled. But we steadfastly deny that the dogmatic curealls promoted by the various cultists can cure an organic, diseased condition of the body.

Unless a so-called healer possesses a knowledge of the fundamental branches of medicine he is in the position of one trying to solve problems in higher mathematics without having even learned to count.

The chiropractors claim that they do not make a diagnosis, nor practice medicine or surgery, when they are applying for admission to practice in a state but it has been proven that in every state where they have been permitted to obtain entrance they have invariably been found prescribing medicine and attempting surgery, which shows that their intention is to get into the practice of medicine by means of the back door, without preparation, thus circumventing the intelligence, labor, and expense necessary to qualify as a regular physician.

It is undisputed, in fact they advertise, that the school of chiropractic boasts of its course in salesmanship. Imagine a self-styled school erected for the purpose of training men and women to be healers of their sick fellow beings, having as one of its most important branches of instruction, a course in salesmanship. There is a vast difference between a commercially intended department of salesmanship for the exploitation of personal interests and individual business, and the imparting of information by an established profession engaged in the earnest endeavor of bringing about longer life and greater happiness, through better health to human kind.

Among the most important purposes of organized medicine, are the education of the public in preventive medicine and hygiene, and making the members of the medical profession most capable of rendering service to humanity

We have no personal favors to ask of the public, and seek no selfish ends. We desire only to promote the health of the community and to prolong the life of the

individual. With this in view, organized medicine has been promoting a widespread campaign for periodic health examinations.

We would much rather be able to prevent illness and, where possible, stamp it out entirely as has been done with yellow fever than to suffer with our patients who are stricken with disease. It is a known fact that countless thousands needlessly suffer and prematurely die due to the lack of timely recognition of curable conditions.

The same attention of inspection has not been given to the human machine as is universally accorded to boilers, elevators, fire escapes and such other inanimate objects. Indeed the lower animals have been more jealously protected.

I feel that in my official position I am justified and may be excused for calling the attention of the medical profession and the public to their interlocking duty of periodic health examinations.

The power of advertising is a wonderfully strong and admitted influence. It is not only the privilege but the duty of the medical profession, to use this tremendous force to spread the doctrine of "keeping well" to the world. I am an earnest advocate of this kind of publicity as my previous remarks must have indicated; but I wish here to sound a note of warning.

Let not our enthusiasm carry the pendulum too far lest we fall into the same pitfalls which tripped, nay often engulfed, some of the groups I have reluctantly been compelled to call attention to. All public information must come from authorized sources in the ranks of organized medicine, and must never be used as a means of personal or group aggrandizement.

If I have done no more than to remind the people and the profession, of the altruistic tenets of non-sectarian medicine I feel that my work has been well done, and I look with promise for the tomorrow of enlightenment and progress.

THE RELATION OF THE RETICULO-ENDOTHELIAL SYSTEM TO THE SPLENOMEGALIES ASSOCIATED WITH NON-SPECIFIC OR SECONDARY ANAEMIA.*

ALLEN O. WHIPPLE, M. D.,
NEW YORK CITY.

Since choosing the subject of this paper for this evening's discussion I have regretted my temerity and fear that ere I am finished you will share my feelings. For the title of this presentation demands a discussion of the spleen, splenomegaly with

Preceding the oration, the following remarks were made by the President, Dr. Maurice J. Gelpi:

This, as you know, is to be the first Stanford E. Chaillé Memorial Oration. The suggestion for this oration came from my predecessor in the chair, Dr. Urban Maes, and was accepted by the Board in the hope that every year such a lecture as this one might be read in order to perpetuate the memory of the great teacher, Dr. Chaillé. Not that this Society can ever forget Dr. Chaillé, but rather as a demonstration of our lasting and continued respect and admiration. The oration was to have been delivered earlier in the season, but on account of the illness of our honored guest, this was impossible; but it turns out nevertheless that we are doubly fortunate, because we were able not only to obtain his consent to come to use in the first place but also actually to have him with us tonight, in spite of his recent illness.

Our first impulse for this meeting was to select some distinguished member of our organization who might befittingly eulogize our guest and introduce him, but on second thought we agreed that it would do him greater honor if we devoted the evening entirely to him. This is what we have decided to do. Dr. Whipple, as you know, is particularly well fitted to deliver the address, the title of which he has selected himself.

He is going to read to us on "The Relation of the Reticulo-Endothelial System to the Splenomegalies Associated with Non-Specific or Secondary Anaemia."

Ladies and Gentlemen, I take pleasure in introducing to you the orator of the evening, Dr. Allen O. Whipple, Professor of Surgery at Columbia University.

From the Department of Surgery, Columbia University.

*First Stanford E. Chaillé Oration delivered under the auspices of the Orleans Parish Medical Society, Monday, December 13, at 8 p. m.

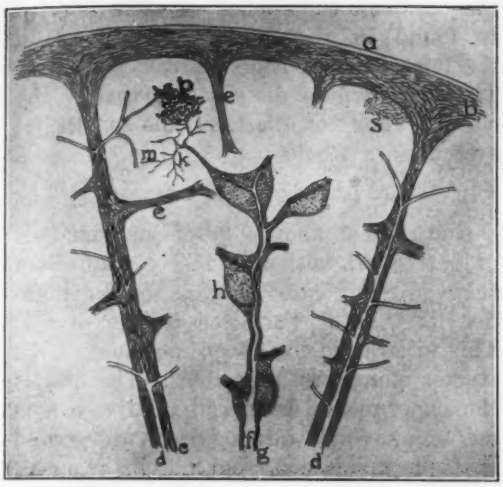

Fig. 1—Splenic Lobule modified after Jordan. (a) tunica serosa; (b) tunica albuginea; (c) trabeculae containing vein; (d) vein; (e) branches of trabeculae inclosing "splenic unit"; (f) artery of lobule; (g) lymphoid sheath of artery; (h) Malpighian body with germinal center; (k) penicilli or precapillary arterioles; (m) ellipsoid body; (p) pulp cords separated by venous sinuses; (s) reticulum arising from capsule.

non-specific or secondary anaemia and the reticulo-endothelial system, three somewhat obscure and much debated subjects any one of which might well be considered as a topic for the evening. If in my considerations, in perhaps a philosophical vein, I may be able to stimulate further interest in the study of the reticulo-endothelial system as a correlating link between the splenomegalies and certain forms of anaemia I shall cherish the sense of rewarded effort. But I realize full well that I am treading uncertain ground and that my steps are beset with pitfalls of theory and conjecture. If in my review of the physiology of the spleen and the clinical picture of the splenomegalies and the non-specific anaemias, and the discussion of the reticulo-endothelial system I cover familiar ground I ask you to bear with me in my endeavor to sharpen some of the points that I am anxious to present to you.

The study of the spleen, in health and disease, has, from the earliest dawn of Medicine down to the present, been of the greatest interest to the profession. Both experimentally and clinically it has caused conjecture and discussion, an ever intriguing problem. The history of the study of the spleen includes such names as Pliny, Galen, Malpighi, Morgagni and Ludwig. Galen's estimate of the spleen as an organ full of mystery (organon pleni mysterii) is still an apt one, for even with the advances of experimental work and clinical study of the past decade we are unable to state all of its functions or to deny that its removal is entirely harmless to the individual.

The fact that splenectomy, both experimental and, in clinical cases, for splenomegaly, has resulted in such confusing and at times contradictory conclusions is due, very largely to three facts. First, because the spleens in the different species of mammals, birds and amphibiae used in experimental work differ remarkably in their ratio of spleen to body weight and more especially in the ratio of reticulo-endothelial cells in other organs. Secondly, because of the capacity of other organs of the reticulo-endothelial system, such as liver and lymph nodes, to take over the work of the spleen after it has been removed. For example, in the goose the reticulo-endothelial apparatus is very largely concentrated in the liver, very little is found in the spleen. In the dog and in man the opposite is normally the case. A third factor may explain much of the contradictory experimental work, especially in young animals, that is, during embryonic life the reticulo-endothelial cells of the spleen are active in the formation of both red cells and leucocytes. At birth this function is taken over by the bone marrow. But the spleen, especially in the young animal, remains as a potential blood forming organ, and under certain conditions, both physiological and pathological, can resume in compensatory fashion this blood forming function.

HISTOLOGY OF THE SPLEEN.

Repeated reference to certain types of cells and their relation to the peculiar

vascular structure of the spleen warrants a review of its histological structure, at best a confusing subject. From the chart which is a modified drawing from Jordan's Text book of Histology, as shown by Pool in his monograph on the Surgery of the Spleen, it can be seen that the connective tissue frame work divides the spleen into lobules and its subdivisions, called by Moll, splenic units. It is the splenic unit that contain the splenic pulp, made up of the venous sinuses, arterial capillaries, pulp cords of cellular elements and the reticulum. It is this complex arrangement of these components of the splenic unit that gives the normal spleen its peculiar soft, spongy feel, and that with the increase of the connective tissue frame work is changed into the enlarged, firm organ seen in many of the splenomegalies.

The venous sinuses are arranged as short anastomosing channels with the internal longitudinal endothelial fibres giving open spaces when the sinuses are distended, thus affording free egress and ingress of blood to the cellular pulp cords. These cells of the pulp cords are made up of macrophages spoken of in the spleen as splenocytes and lymphocytes so that usually the spleen pulp tissue is made up of splenocytes, lymphocytes, red blood cells and the other cellular elements of the circulating blood.

The arterial capillaries probably form a direct connection with the venous sinuses, in a sense a closed circulatory system between arteries and veins with the venous sinuses letting out and taking in blood from the splenic pulp.

The delicate supporting frame work of the splenic pulp is called the reticulum. These fine fibrils of connective tissues are derived from the terminal branches of the trabeculae of the splenic unit. They are covered by or lined with flat endothelial cells. The fine reticulum with its covering of endothelial cells is part of the reticulo-endothelial system which is found in the spleen as well as in the lymph nodes, bone marrow and liver. These cells will be discussed further, in the consideration of the reticulo-endothelial system as a whole.

PHYSIOLOGY OF THE SPLEEN.

Our present knowledge of the functions of the spleen although less certain than that of many other organs is far more definite than it was even ten years ago. This knowledge has been obtained from studies along two main lines. The first is the experimental work on relatively normal animals with intact spleens, the second is the data obtained from a study of splenectomized animal and human subjects. The entire subject of the physiology of the spleen along the above lines has been so thoroughly studied in recent years by Pearce, Krumbaar and their colleagues that I can do no better than to quote you their summaries. The first of these by Krumbaar[1] in a review of the physiology of the spleen in January of this year is quoted in paragraphs with additional comments. I would call your attention to the repeated references in this summary to the reticulo-endothelial cells and the part they play in the physiology of the spleen.

1. "The mammalian spleen, while not necessary for the maintenance of normal existence and sharing many of its functions with other members of the hemolytopoietic system, is useful in several ways and an organ whose presence under certain stresses may even be the deciding factor between life and death. Its functions are largely indicated by its structure, its reticulo-endothelial cell content and by the changes produced in other organs by its absence."

2. "There is good reason to consider it a blood resevoir that can be called upon efficiently to meet various physiological and pathological demands."

Comment—The recent work of Barcroft of the Cambridge School of Physiologists

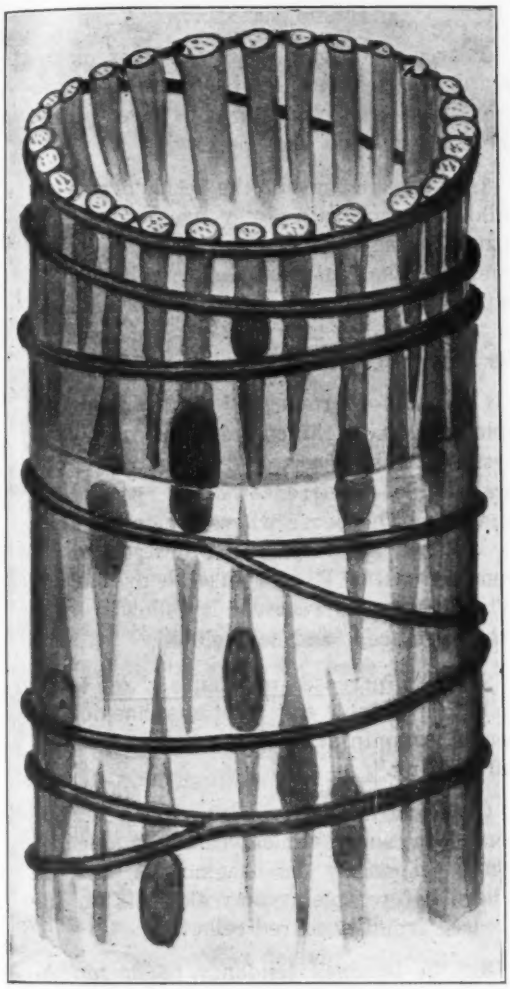

Fig. 2—Schematic drawing of splenic venule showing the elongated endothelial cells, the structureless membrane and branching reticulum fibres encircling the endothelial cells. (After Mollier.)

has established the reservoir function of the spleen. By isolating the spleen on the skin surface of the dog's body, leaving the vascular supply intact, Barcroft has given visible, palpable proof of the difference between the large spleen at rest and the contracted spleen after exercise. That the spleen can pour and store blood is shown in carbon monoxide experiments with normal and splenectomized animals, the latter group succumbing to amounts of the poison tolerated by the former.

3. "It is directly concerned in blood cell formation during the fetal life and can revert to this function upon demand at any period of existence. It continues to furnish lymphocytes, large mononuclears and possibly other blood cells through most of adult life and has an indirect influence on blood formation, through a stimulating action on the bone marrow, possibly after activation by the liver."

4. "It is intimately concerned in the processes of red blood cell destruction, a role greatly increased in certain pathological conditions. It not only, in some way as yet unknown, renders circulating erythrocytes more fragile, but through its reticulo-endothelial cells, has the ability to scavange blood cells and bacteria from the blood. It takes up disintegrating erythrocytes as a step in blood pigment metabolism, both in the form of fragmented cells, hemoglobin bearing dust or even, in conditions of increased hemolysis, of whole cells (graveyard function). It not only is the richest hoarder of iron in the body, but also prepares bilirubin pigment from the broken down hemoglobin for passage to the liver. In the absence of the spleen it becomes more difficult to produce jaundice with haemolytic agents. Continental authorities consider it the controlling organ for iron metabolism in the body."

Comment—During the past two years by means of spectrophotometric methods Mann[2] of Rochester has demonstrated that the blood of the splenic vein contains more bile pigment, the result of red cell destruction, than does the bood in the splenic artery. This corroborates the microscopical evidence of red cell destruction as seen in the phagocyted erythrocytes contained in the reticulo-endothelial cells of the splenic pulp. The reticulo-endothelial cells with those in other parts of the body manufacture the bile pigment and pass it on to the liver where it is modified and excreted as bile.

5. "It seems to be an important site of antibody formation (again through the reticulo-endothelial cells), though this function is quickly taken up by other organs in its absence. Through its lymphoid role, it also plays a part in resistance to such infections as tuberculosis. Preponderating evidence points to its also being concerned with biological resistance to tumor growth."

6. "Its relation to metabolism is less manifest. Disturbance in growth and digestion following its removal, maintained by some, are denied by more; and the same can be said of its relation to basal, nitrogen and carbohydrate metabolism. It seems to have a more definite connection with fat metabolism, especially cholesterol and the unsaturated fatty acids, which may be the reason for the improvement which splenectomy often procures in clinical anaemias, though here too authorities are far from unanimous."

7. "With regard to its relations to other organs, the liver, lymph nodes (lymphoid tissue generally) and bone marrow, as members of the haemolytopoietic system, are so closely allied that they share certain of its functions normally and quickly take over the remaining share after extirpation of the spleen. It has special affiliations with the liver on account of its definite "upstream" position in the portal circulation and possibly others of a more specific incretory nature. An interesting association with the parathyroids in calcium metabolism has recently been suggested. Supposed antagonistic relations with the thyroid await confirmation; connection with the thymus or ovary apparently does not exist and a possible synergistic relation to the pancreas is probably better explained as an especially marked participation (perhaps through its reservoir function) in the effects of the inanition, rather than by a specific hormonal connection."

EFFECTS OF SPLENECTOMY.

Pearce and Krumbaar[3] in their monograph "The Spleen and Anaemia," state that after splenectomy in dogs three prominent phenomena are observed:

1. "An anaemia of the secondary type, mild or moderate in character, which usually reaches its severest stage after one and a half months, and is followed by repair which is well advanced after three or four months but may not be complete for longer periods of time."

Comment—A review of the literature of splenectomy in clinical cases of injury or cyst of the spleen, would seem to corroborate this occurrence of a secondary anaemia. Of course where the spleen that is causing excessive blood destruction is removed as in Banti's disease or haemolytic icterus, its removal is followed by a rise in red cells and hemoglobin.

2. "An increased resistance of red blood cells to hypotonic salt solutions, haemolytic serum, saponin and cobra venom, mechanical shaking."

Comment—This is also definitely observed in many clinical cases of splenectomy, especially in haemolytic icterus where before splenectomy there is an increased fragility of red cells.

3. "A lessened tendency to haemoglobinuria and jaundice, and sometimes an absence of jaundice after the administration of haemolytic agents." In addition it has been observed that in splenectomized dogs the bone marrow after a period of weeks changes from fatty marrow to red marrow. By many observers it has been noted that animals after splenectomy show marked hyperplasia of the lymph nodes, especially the mesenteric nodes. The reticulo-endothelial cells lining the lymph sinuses take on a very active phagocytosis of red cells, apparently a compensatory function in the absence of the spleen.

Before discussing the relations of the spleen to the clinical entities under con-

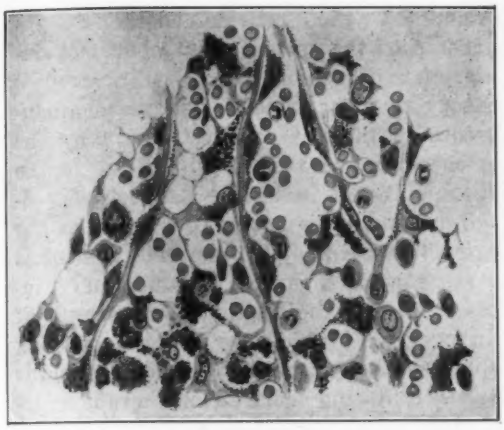

Fig. 3—Section of normal splenic pulp of rabbit after vital staining, showing reticulo-endothelial cells and macrophages or splenocytes with carmine granules. (After Kiyono.)

sideration and their associated anaemia, it is essential to devote some attention to the so-called reticulo-endothelial system. Distributed throughout the spleen, the liver, the lymphatic system, the bone marrow, the vascular net work of the omentum and mesenteries, in close association with the minute blood vessels and blood spaces of the connective tissue frome work of these organs and structures there are found certain well-defined connective tissue cells both fixed and wandering. These cells, their origin, morphology and function, have been intensively studied by such eminent authorities as Ranvier, Marchand, Metchnikoff, Ribbert and in recent years, especially, in this country by Sabin, Cunningham, Doan and Evans, and in Germany by Aschoff and his pupils. It is to Aschoff that credit is due for building these cells into a system and the elucidation of their relation to other structures and functions of the body. It is impossible in the time at our disposal to go into the controversial points of the debate between Sabin, Cunningham, Aschoff, Kiyono and others of the Freiburg School. But suffice it to say that regardless of the origin of the reticulum cells and the endothelial cells, there is a general agreement as to their function.

The following are the chief characteristics of these cells:

1. They are derived from the fixed connective tissue elements, and are not considered by Aschoff to be haematogenous in origin. Under the main term reticulo-endothelial system are included the reticulum cells of the splenic pulp and of the lymph nodes, the endothelial cells covering the reticulum and lining the venous sinuses of the spleen, and the lymph sinuses of the lymph nodes and the capillaries of the liver (Kupffer cells) and blood spaces of the bone marrow. In addition there are included in this system the free wandering connective tissue cells in various organs and systems and endothelial leucocytes or monocytes and the splenocytes of the splenic pulp. Finally the peculiar adventitial cells on the walls of the peripheral capillaries, first described by Rouget and bearing his name, are considered by Aschoff to be a part of the reticulo-endothelial apparatus. Whether the Rouget cells have contractile properties as stated by Vimtrup in his studies with Krogh[4] of the capillary system, is a disputed point, but they are of great interest from the standpoint of capillary haemorrhage which is seen in purpura haemorrhagica.

2. These reticulo-endothelial cells are the great phagocytes of the body, called clasmatocytes by Ranvier and macrophages by Metchnikoff. They engulf cells, cell products and cell detritus and parasites of all kinds from bacteria to minute inert foreign bodies. The site of greatest phagocytic activity varies in different species, in the birds for instance it is most active in the liver, in omniverous mammals this is most pronounced in the spleen.

3. But the distinguishing characteristic, common to all the cells of this system, constantly and easily demonstrable, is the interesting fact that these cells can be vitally stained. That is when a dye stuff such as lithium, carmine, trypan blue or

neutral red in complete solution is injected into the blood stream of an animal the reticulo-endothelial cells absorb the dye, without apparent injury, and show the dye as a granular deposit in their cytoplasm. Aschoff considers this *intra vitam* staining, with a dyestuff in solution, characteristic and a differentiating characistic. For phagocytosis as such, is not limited to the reticulo-endothelial cells. It is, as is the vital staining, an evidence of the storage capacity (*Speicherung*) of the cells of this system. The outstanding researches of Goldmann[5] in perfecting the vital staining method and of Kiyono[6] have shown that this system of cells with their characteristically vital staining and phagocytic and defensive properties can be demonstrated throughout the entire animal series, from the cyclostomes to mammals.

A discussion of the splenomegalies associated with specific blood pictures such as the leukaemias, pernicious anaemias and polycythaemia is not undertaken in this presentation for two reasons: 1. These diseases have to do primarily with dyscrasias of the blood forming apparatus and do not seem to be so definitely related to the reticulo-endothelial cells. 2. These diseases from the standpoint of surgical therapy are very disappointing. Splenectomy not only is of no benefit but may hasten the fatal outcome. That is, to the surgeon the syndromes to be discussed are of prime interest because of the favorable results with splenectomy.

If we consider the splenomegalies associated with a secondary anaemia from the standpoint of disturbed physiology of the reticulo-endothelial system we may derive a new perspective in the study of these diseases. These are grouped as Banti's disease, haemolytic icterus, thrombocytopenic purpura haemorrhagica, Gaucher's disease and a certain ill defined group which still parades under the title of splenic anaemia.

Banti's Disease: In this disease it would seem that some irritant or poison had stimulated the reticulo-endothelial apparatus of the spleen to an abnormal destruction of red cells. The Lintvarew[7] theory that the anaemia is due to an increase in the red cell destruction by the splenocytes and the fibrosis is due to the chronic irritation of the product of red-cell destruction is not as convincing as the prevailing opinion that the enlargement is a response to a chronic inflammatory process, and that the anaemia is the result of an over activity of the blood destroying splenocytes. Symmers[8] considers syphilis as the irritating agent. That there is an irritating agent causing an increase in connective tissue in the liver as well as the spleen such as is seen in some cases of syphilitic hepatitis lends weight to Symmers' view. Certainly Banti's disease is more closely related to the cirrhoses than are the other splenomegalies under consideration, but differs from the liver-spleen syndromes in the more severe anaemia.

The good results following splenectomy in the early stages of this disease favor the view that the primary cause is in the spleen, and these good results are shown not only in an improvement in the anaemia, but an arrest of the degenerative changes in the liver, and the portal obstruction. In the cases operated upon before the ascitic stage it is interesting to note that other parts of the reticulo-endothelial system do not take on or continue the red cell destruction.

Hemolytic Jaundice: The cardinal symptoms of both types of this disease, congenital and acquired, are chronic enlargement of the spleen, a non-obstructive jaundice and an anaemia of the secondary type. As previously stated, blood destruction under physiological conditions is one of the chief functions of the reticulo-endothelal cells of the spleen, and in mammals especially this blood destruction is concentrated in the spleen. It is in haemolytic icterus that the phagocytosis of red cells passes from a physiological to an extreme pathological degree. The excessive red

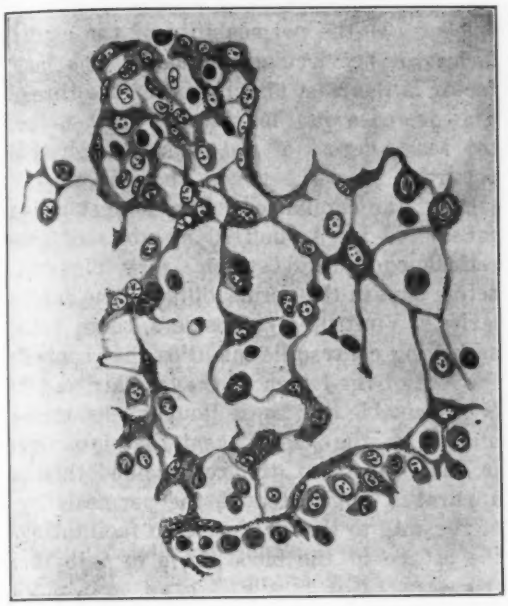

Fig. 4—Section of lymph sinus of a mesenteric lymph node of normal rabbit, after vital staining. Reticulo-endothelial cells and endothelial leucocytes show carmin deposits. (After Kiyono.)

cell destruction results in an amount of bile pigment beyond the ability of the liver to excrete it as bile, and although there is no mechanical obstruction to the bile flow as proved by the normal colored stools there is a jaundice of a degree varying with the red-cell destruction. Whether the increased fragility of the red cells is caused by an agent in the spleen or elsewhere in the reticulo-endothelial apparatus is disputed. But the fact that with the removal of the spleen pathological red-cell destruction ceases, while the increased red-cell fragility persists in many cases, would argue in favor of the hypothesis that the cause of the increased red-cell fragility is extra splenic; whereas the over active red-blood-cell destruction is confined to the spleen.

In this disease, as in no other splenopathy, splenectomy gives brilliant immediate as well as permanently curative results. We have observed two cases for a period of over ten years with no recurrence of anaemia or jaundice. All seven of our patients have remained well. Apparently in this disease the reticulo-endothelial cells outside of the spleen do not take over the pathological red-blood-cell destruction after the spleen has been removed.

Purpura Haemorrhagica: The pathogenesis of this disease is far more complex because more problems are involved. Not only is there an anaemia, but the blood platelets are markedly diminished, the bleeding time and blood clot retraction time are prolonged and there is a disturbance in the permeability of the capillariies giving rise to more or less extensive haemorrhage. The relation of the spleen as an etiological factor to these disturbances is not so well defined as it is for instance in haemolytic jaundice. The fact that many of the cases of chronic thrombocytopenic purpura remain cured for periods of five years and longer after splenectomy argues for a causative agent in the spleen. But not all of the cases are cured by the operation, even though they may have, for a period of months, remained free from symptoms. One of our patients illustrates this strikingly. A boy of 18 had been incapacitated for five years with repeated attacks of bleeding, requiring many transfusions. He came to the hospital almost exsanguinated, his bleeding time was over an hour, platelets were so few as to be uncountable, tourniquet test was strikingly positive. After two transfusions I removed his spleen. Between the time of removal of his spleen and the suturing of his skin wound bleeding had stopped. Within 24 hours his platelet count had risen to 600,000. His entire appearance and sense of well being had improved remarkably. His recovery was uneventful. For eighteen months he remained symptom free, returned to school and athletic activities. Then without any known cause he developed petechiae, nose bleed and began bleeding into all his tissues, and within three days he died of subdural haemor-

rhage. As in many of the reported cases the initial rise in his platelet count fell within two weeks to 10,000 or less and remained at that level during the eighteen months of his return to good health. Few such cases, if any, have been reported, but this case brings up many interesting questions.

As pointed out by the writer[9] in an analysis of the results of splenectomy in thrombocytopenic purpura haemorrhagica: "Inasmuch as the reticulo-endothelial cells get rid of the jaded or excessive blood platelets, it is logical to think that in a diseases such as purpura haemorrhagica, in which a low or absent platelet count is a prominent feature, some part of this system is overactive. If the overactive cells are largely limited to the spleeen, its removal would promise immediate good results, and probably permanent results. But if the entire reticulo-endothelial circle is involved, splenectomy would do no more than remove a part of the overactive apparatus, and such a major procedure in the presence of a profound vascular disturbance, as in the acute form of purpura, is extremely hazardous to the patient." Whether the decrease in blood platelets is due to the failure of the megacaryocytes of the bone marrow to form new platelets or to an overactivity of the reticulo-endothelial cells in destroying them is still a debated question. The more generally accepted theory is that of Kaznelson that the platelets are destroyed by overactive phagocytosis in the spleen and other parts of the reticulo-endothelial apparatus.

It is furthermore generally agreed that the blood platelets are the most important formed elements in the blood clotting phenomenon in their formation of a thromboplastic substance. The severity of the bleeding in purpura would therefore seem to depend upon (1) the intensity of platelet destruction; (2) the extent to which certain cells in reticulo-endothelial system engaged in this destruction are distributed in this system outside of the spleen; (3) the permeability of the capillaries to the circulating blood. The last factor is the least understood of the three. The decrease in the platelets may favor the ready egress of red cells through the potential spaces between the endothelial cells of the capillaries. The Rouget cells, considered by Aschoff[10] as units of the reticulo-endothelial system, may play an active part in the permeability of the capillaries. Vimtrup[11] considers these cells as having contractile qualities that control the size of the lumen of the capillaries. It is conceivable that these Rouget cells, stimulated by the same agent that is active in other parts of the reticulo-endothelial apparatus, might disturb the permeability of the wall to the blood stream facilitating the escape of the blood from or into the tissues.

That the normal spleen destroys thrombocytes is favored by the fact that there is practically always a sharp rise in the platelet count after splenectomy, both in experimental animals and in clinical cases. But there are other definite factors that cause a thrombocytolysis, either by direct action or by overstimulating the elements in the reticulo-endothelial system that normally destroy thrombocytes. Cole[12] in 1907 first demonstrated that the platelets could be destroyed in one animal by injecting into it antiplatelet serum developed in another animal. Other workers have reproduced the clinical signs and the blood changes characteristic of purpura by a subcutaneous injections of antiplatelet serum.

The same results have been obtained by injecting the by-products of streptococcus and pneumococcus. And it is known very definitely that the lighting up or the failure to drain of a streptococcus focus, as in an antrum or sinus infection, will result in a great diminution of the thrombocytes, and an appearance of petechiae and purpuric bleeding. It may be that the poisons from bacteria may stimulate some element in the reticulo-endothelial system to an excessive thrombocytolysis. This factor of in-

fection is a most important one and may be the underlying cause even in the so-called idiopathic purpura cases.

The efficiency of splenectomy in purpura depends upon whether at the time of the operation the major part of the thrombocytolysis is taking place in the spleen and whether after operation other units of the reticulo-endothelial system do or do not take on the pathological degree of thrombocytolysis. In the so-called chronic type of the disease, with the spleen hypertrophied it would seem that the platelet destruction was confined to the spleen for it is in this type that splenectomy produces brilliant and usually lasting results.

Gaucher's Disease: This disease is a clear cut entity, but it has little in common with the other splenic anaemias, beyond the chronically enlarged spleen and moderate anaemia. It is less familiar to the physician because of its rarity. It occurs more frequently in females, beginning insidiously in childhood and usually running a chronic course for 15-20 years. It may occur in more than one member of a family. It is characterized by a progressive enlargement of the spleen, a low grade anaemia of the secondary type, pigmentation of the exposed skin, and a tendency to bleed from the nose, skin, gums, uterus and into the skin. The pathologic picture is characterized by the presence of large polygonal or oval cells, with one or more small nuclei in a pale acidophilic cytoplasm, that are found in the spleen, liver, lymph nodes and bone marrow. Save for the simple anaemia there are no abnormal blood findings. A very excellent discussion of this syndrome with a thorough analysis of the 50 collected cases from the literature was published from the Surgical Department of Columbia by Cushing and Stout[13] in February of this year.

Both Aschoff[10] and Mandlebaum,[14] who gave this disease its most complete pathologic study, consider the Gaucher cells characteristic of the disease as derived from the reticulo-endothelial cells of the organs in which they occur. The fact that they are not found phagocyted in the lung or in the lung capillaries is an argument against their being distributed from the spleen to the liver and thence through the lung into the systemic circulation. It would seem that in this disease some irritant gave rise to an abnormal activity of the reticulo-endothelial cells in the spleen, the liver, the lymph nodes and the bone marrow. It is generally agreed that these cells proliferate mostly in the splenic sinuses. For this reason the removal of the oft times enormous spleen results in great improvement. But how much the other organs take on a compensatory activity is uncertain. So far as I know no cases splenectomized for any length of time have come to autopsy. The fact that in one of our cases extensive invasion of the head of the femur by Gaucher's cells was found at operation on the hip joint after a splenectomy shows that the disease may be progressive. For this reason the results in many of the cases are not brilliant and the prognosis for prolonged cure is doubtful. Thus in this disease also the abnormal reticulo-endothelial cells are the cause of the splenomegaly and in all probability of the anaemia inasmuch as the haemorrhagic tendency is usually present.

Finally there is a group of cases which for want of a better term and for many years have been spoken of as Splenic Anaemia. In these patients there is little else to be found in the examination other than an enlarged spleen of variable sizes with a mild secondary anaemia. It is impossible to differentiate these cases from those cases which later go on to the ascitic stage of Banti's disease, and for this reason, many clinicians consider them to be early or preascitic cases of Banti's disease. From the therapeutic standpoint, the indication for splenectomy and the prognosis following splenectomy are the same as in Banti's disease.

CONCLUSIONS.

In concluding this analysis, necessarily brief and in many respects conjectural, I should like to leave with you the following propositions:

1. In a certain group of splenomegalies that respond to surgical therapy there is an associated anaemia secondary in type and showing no specific blood picture.

2. The deranged functions of the spleen in these clinical entities would seem to be due to the derangement of the reticulo-endothelial apparatus.

3. The extent to which the derangement of the reticulo-endothelial cells is limited to the spleen determines apparently the efficacy of splenectomy.

4. The capacity of the reticulo-endothelial cells of parts of the reticulo-endothelial apparatus outside of the spleen to take over physiological and pathological activities of the spleen compromises the prolonged period of relief following splenectomy in such conditions as thrombocytopenic purpura haemorrhagica.

5. In studying these disease we must consider them in terms of the reticulo-endothelial system.

6. A more comprehensive knowledge of the reticulo-endothelial system will do more than all else to clarify our ideas regarding the splenopathies.

Results in the Presbyterian Hospital Series of splenectomies for the splenopathies under discussion.

Numbers above the line represent years.

Numbers below the line represent cases followed.

D. represents time of death

Banti's Disease:

16 Splenectomies, 3 Postoperative deaths.

D	D			D							
1	2	3	4	5	6	7	8	9	10	11	12
4		1		1	1						1

2 cases lost to follow up.
6 cases symptom free.
1 case improved.
1 case unimproved.

Haemolytic Icterus:

7 Splenectomies. No postoperative deaths.

1	2	3	4	5	6	7	8	9	10
3	1		1	1					1

All cases symptom free.

Thrombocytopenia Purpura Haemorrhagica:

4 Splenectomies. No postoperative deaths.

	D
1	2
1	2

3 cases symptom free.

1 case died after 18 months of complete relief of an acute exacerbation of purpura.

Gaucher's Disease:

3 Splenectomies. 1 postoperative death.

1	2	3	4	5	6

1 case at end of 5½ years complains of asthenia.

1 case at end of 2 years markedly improved.

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Remarks of the President following the Chaillé Oration:

Ladies and Gentlemen: The chair cannot refrain from extending in your name a vote of thanks to Dr. Whipple. By his masterful presentation of a most fascinating, scientific subject he has brought into realization our fondest hopes for this memorable occasion.

Since this is the first Chaillé Oration, however, it would seem to be especially appropriate to hear something about Dr. Chaillé himself. There happens to be present here tonight, two of his close, lifelong friends who will be willing it is

hoped to introduce a personal phase to this delightful evening by telling us some of the things that they know about the man and the teacher whom we are honoring tonight. The chair will therefore take the liberty of calling upon first Dr. Ernest Lewis, and second Dr. Rudolph Matas.

Dr. Ernest Lewis:

I date my acquaintance with Dr. Chaillé some years before he was known to my friend Prof. Matas; from 1859, sixty-seven years ago, when I began my medical studies. Probably but few in this audience were then born. He was Demonstrator of Anatomy in the Medical Department.

I felt a warm friendship for him. He was a man of high character with a strong sense of justice. At the outbreak of the civil war in 1861 he joined a light cavalry company and before the close of the year was acting Surgeon General of Louisiana. Before the fall of New Orleans he became Medical Inspector of General Bragg's army in Tennessee serving in that capacity for nearly a year when he was ordered to take charge of a hospital in Atlanta. From there, after eight or nine months service, he was ordered to Macon as head of another hospital where he remained until taken prisoner near the close of the war. Being paroled he returned to New Orleans, and when the Medical Department reopened, after a suspension of two years, resumed his duties.

That I can furnish these details on the spur of the moment concerning the life of Dr. Chaillé is due to the fact that I represented the Medical Alumni in an address at the Chaillé Jubilee given at the Tulane theater some years ago, and more recently delivered another on armistice day in Metairie cemetery. On the death of Dr. Thomas Hunt, distinguished Dean and Professor of Physiology and Pathology, he was appointed to the vacant chair.

He was thoroughly qualified from an educational point of view—a graduate from Harvard with the B. A. degree, and a few years later that of Master of Arts. He was also a graduate of the Medical Department of the University of Louisiana, now Tulane, and then followed a course of medical studies in Paris, devoting himself especially to Physiology and working in the laboratory of Claude Bernard, the most eminent physiologist of his day.

As a lecturer he was not surpassed in the Faculty. He was logical, clear and concise, with a forceful manner which fixed attention, impressing his subjects on the minds of his hearers. He was loved by the students and his classes were always well attended.

On the death of Dr. Richardson, the eminent Professor of Surgery, and Dean of the Faculty, he was unanimously elected Dean. In that position he displayed great administrative and executive abilities and under his leadership the Medical Department prospered greatly.

Notwithstanding his college work as Dean and teacher he found time to lecture once or twice a week on Hygiene to teachers of Public Schools and the public.

He was a prolific writer, his contributions to medical literature giving him a national reputation. He was honored on various occasions. He was one of a select few asked to write a paper for the International Medical Congress, to meet at Philadelphia. The subject of his paper, Medical Jurisprudence, was highly praised by the President and members of the Congress. He was one of twelve appointed by the Congress of the United States to investigate the yellow fever epidemic of 1878 and was secretary of this board. He was one of four appointed by the National Board of Health on the Havana Yellow Fever Commission, and its chairman. He was also one of seven appointed by President Arthur on the National Board of Health and later was appointed Supervisor General of the board in New Orleans.

Although of positive character he was far from dogmatic. He was also of a sympathetic nature with much warmth of feeling and it pained him to reject a student howsoever undeserving of consideration who failed on examination in his branch. He was influenced only by his strict sense of justice. In that respect he differed from the eminent Dr. Warren Stone, Professor of Surgery, who on one occasion plead with his colleague for a student who had failed to obtain the necessary number of affirmative votes for graduation, that he was studious and attentive, never missing his lectures but handicapped by lack of education, and that at any rate he knew more than the people in the settlement out West where he expected to locate and would not discredit the college.

Dr. Rudolph Matas:*

I regret that I had no notice or anticipation that I would be called tonight to speak of Dr. Chaillé. Like so many of Dr. Chaillé's remaining pupils, personal friends and admirers, I came here solely to enjoy Dr. Whipple's lecture—the first of the series that the Orleans Parish Medical Society has so appropriately dedicated to the memory of one of its illustrious founders and honored leaders. I would have preferred to have had more time to collect my thoughts, at least

*Revised and enlarged from the stenographer's notes.

in a way that would have given me an opportunity more adequately to express the sentiments evoked by his memory and to render a tribute more worthy of him and of this occasion. None the less, I feel that I, who knew Dr. Chaillé so long, and who loved and admired him so much, should be ready at all times to speak his praise. I realize that whatever I may now say can at best very imperfectly voice the sentiments which Dr. Chaillé inspired in me. Again, I regret that, in spite of the abundance and vividness of my recollections, I can do so little to convey to you anything like a fair concept of his merit and of his extraordinary personality.

To him, more than to any other of my teachers, next my parents, I owe the greatest inspiration in my professional life. To his advice, sympathy and encouragement in the formative period of my medical career, I am indebted for the best of whatever service I may have rendered to my own advancement, to my profession and to my fellows. Merely to think of him stirs my emotions and unfits me to speak with that calm serenity and critical deliberation that might befit an impersonal, distant commentator or biographer. Such an attitude can never become one who reveres his memory with a gratitude as inextinguishable as is mine. Fortunately, my partiality and devotion to him do not affect his merit, by exaggeration, for I am only one of the hundreds and thousands of the Alumni of this School who enjoyed the privilege of his teaching—who have shared my affection for him—many of whom, now living and here present, would rise in a body to acclaim him and testify to his greatness as a leader and man among men.

It is also fortunate for me that the life, labors and achievements of Dr. Chaillé, as told by distinguished and eloquent speakers on at least three relatively recent occasions, are still fresh in the recollection of many who participated in them—among whom I am happy to see here tonight our beloved Dr. Lewis, one of Dr. Challé's contemporaries and most trusted friends.

The first celebration was the "Chaillé Jubilee Night" held under the auspices of the Tulane Alumni Association on May 19, 1908—nineteen years ago, when, (after half a century of unsurpassed usefulness and unremitting toil in the service of his Alma Mater, as Demonstrator of Anatomy, Professor of Physiology, Pathological Anatomy, Hygiene, Dean of the Medical School, and in other capacities), the official career of our illustrious Dean was, by his retirement, brought to a close amid a paean of praise and spontaneous outbursts of enthusiastic admiration that will remain memorable for all time, as the greatest demonstration of admiration and approval ever accorded a member of our profession in this historic city.

The second public demonstration, "the Chaillé Memorial Night," was held in this very hall on the night of April 25, 1912, when the Louisiana State Medical Society set apart one of its evening sessions to commemorate Dr. Chaillé's service as the foremost organizer of the medical profession in Louisiana and the father of the fundamental laws related to medical legislation which have been incorporated in the Constitution of the State. This memorial meeting, which was held nearly one year after Dr. Chaillé had passed to his eternal rest (May 27, 1911), was made resplendent by the series of biographic and eulogistic addresses delivered by several of the most distinguished representatives of the medical and legal professions of the city and state. These suffice to prove how profoundly Dr. Chaillé's dominant personality had stamped itself upon the medical history of Louisiana, and how gratefully and how reverently his memory is cherished by his contemporaries and successors, as that of the most constructive medical statesman that this State has ever produced.

The reunion of the Alumni of the Medical Department of Tulane University in New Orleans on November 26, 1924, in connection with the meeting of the Southern Medical Association, gave the third opportunity for another "Chaillé Memorial," which was attended with such enthusiastic manifestations of approval that everyone present felt the throbbing pulse of that great gathering as it moved in harmony with the recital of his achievements. Nor can anyone doubt that the same influence which had stirred, controlled and swayed the undergraduate ranks during the half century that Dr. Chaillé had taught in the School and flourished in this community, still lived in the hearts of the Alumni as a magnetic force which gave an almost tangible reality to the spirit of the departed Master, when invoked, as it was, tenderly and reverently on that occasion.

I need go no further than the mere mention of these three historic celebrations, in which public homage was rendered Dr. Chaillé as a medical educator, organizer, law-giver and statesman, sanitarian, scholar, philosopher, writer, soldier and patriotic citizen, to prove that, by virtue of his surpassing achievements, the medical profession of Louisiana has accorded him a lofty place in the pantheon of its immortals.

Perhaps what I have said would suffice as a general appreciation of the merit of the man whose memory the Orleans Parish Medical Society honors tonight by inaugurating this splendid course of scientific lectures under the aegis of his

name. But since, as one of his devoted and most attached students, I have been called to speak of him, it may not be inappropriate that I should refer, in some manner, to the personal relations that gave me an insight into his character and established him firmly in my mind as one of the most remarkable of the intellectual men whom I have met, and the noblest of friends.

It happened that in the earliest years of my student life, while an undergraduate interne at the Charity Hospital and after I had served my first term in that institution, during the disastrous epidemic of yellow fever in 1878, I had the good fortune to be called by Dr. Chaillé and Dr. Bemiss (at that time professor of the principles and practice of medicine, and one of the most loved teachers in our school) to serve as an attaché of the Havana Yellow Fever Commission of the U. S. National Board of Health. This Commission came into existence in 1879 as a reaction from the panic caused by the epidemic of 1878. This was the first commission sent by the United States government to survey and report on the sanitary conditions of Havana and the island of Cuba—then known as the most dreaded focus of yellow fever in the Western Continent. Dr. Geo. M. Sternberg, the most eminent bacteriologist of his day and subsequently Surgeon General of the U. S. Army during the Spanish War, Dr. John Guiteras, later justly famous as a yellow fever expert and sanitarian, and Col. Hardie, a distinguished Louisianian and sanitary engineer, were the members of this Commission. Mr. Henry Mancel, photographer, and I, as clerk and laboratory assistant, served as attachés.

During the three months of the summer of 1879, that the Commission pursued its investigatioins in Cuba, I had the inestimable privilege of coming daily in close contact with Dr. Chaillé, who was my teacher and to whom I clung as my chief guide and mentor. During these three months of almost constant association, there sprang up an intimate and, to me, delightful relationship with my chief, in which my functions as interpreter, translator, clerk and laboratory assistant, gave me an exceptional opportunity to learn from his attitude and reactions to the innumerable and complex, problems that were presented to him, his wonderful capacity to cope with difficult and unexpected situations, and to emerge from them triumphantly with an ease and dignity that would have accredited the most experienced and tactful diplomat.

And yet the so called "arts of diplomacy" and dissimulation were entirely foreign to him. His success in dealing with men rested chiefly upon his knowledge, his honesty, truthfulness, high sense of justice, and a directness of thought and action that left no room for doubt or cavil as to his meaning or intention. Unusually unaffected and unpretentious, he despised show, conceit or pretence. No one detested knavery or trickery more than he. His address to one of the graduating classes on "The Practice of Medicine as a money making occupation" is memorable as a crushing indictment of current tendencies toward commercialism in medicine and a forceful appeal to the finest ideals of the profession.

Whether exchanging official courtesies with the Captain General—a grandee of Spain—or in meeting delegations of the learned from scientific and professional institutions of the island, or in addressing the staffs of the numerous military and civil hospitals of Havana, his speeches were models of correct form and appropriate diction. His mastery of the subject that had brought him to Cuba, and his accomplishments as a finished scholar and scientist, instantly gave him recognition and accorded him all the dignity and the highest honors that could be bestowed by a foreign government and its learned corporations.

To sit at table and listen in respectful silence to his conversation with his distinguished associates and guests, in which the topics of the day were discussed and commented upon, was a delightful experience which I always anticipated with the greatest relish. The suggestiveness of his conversation, which sparkled with wit and wisdom, and always entertaining, was, in itself, a liberal education. Whether at table or in formal conference with official delegates, his remarks and observations were keen, pointed and pithy; they immediately gave him precedence and commanded the most respectful attention.

Long before this Cuban experience, Dr. Chaillé had won my unbounded admiration as a teacher and a man of learning; but in this Cuban expedition, his independence of character, moral and physical courage, absolute regard for the truth, his intellectual integrity, sound judgment and practical common sense, high sense of duty, loyalty, clearness and breadth of vision, punctuality, untiring application and concentration in the discharge of his duties, accuracy of thought and speech, were all calculated to inspire respect and were extremely illuminating to all, but to none more than to the inexperienced youth and raw recruit from the medical ranks, whose duty it was to follow him and to rack his brain in the vain effort to translate his leader's fine thoughts and impeccable, forceful, finished English diction into a foreign and difficult tongue. This was the more trying when the interpretations had to be made to critical individuals or audiences who could scarcely do justice to his merit except when spoken to in their mother tongue.

The oft quoted saying, "That no man is a hero to his valet" and that "Familarity breeds contempt," may be true of valets and of certain types of men. Indeed few men, no matter how great and gifted they may be, can stand the test of prolonged intimacy without revealing in some way the frailties of the mind and of the flesh, when exposed to the nakedness of private life. Flaws of character and flaws of the flesh, which seem inherent in human composition, often dim the halo of glory that surrounds the otherwise great men and women in the eyes of their familiars. These thoughts are not applicable to Dr. Chaillé, who was never familiar in any vulgar sense and who was honored with the respect and affection of his humblest and most menial servants, as well as of his nearest and most intimate friends. In fact, many amusing stories could be told to illustrate the extraordinary hold of Dr. Chaillé, from his earliest childhood, upon the affections of his servants; whether white or black, they were all proud of the distinction of serving such a master.

Personally, I can truthfully say, from all the opportunities for observation given by my long and close contact with Dr. Chaillé, during the period that we lived together under the same roof, in Havana, he never lost his prestige, and never, for an instant, did he cease to be a hero in my eyes.

There are many men who have great minds, men of genius, or talented in many diverse and highly specialized lines,—each excelling in his own peculiar way, but I have never known one who combined in a single personality so many notable, superior traits of character and attributes of mind, as Dr. Chaillé.

His mere presence commanded respect,—will, character, intellectual power, were indelibly stamped upon every line of his virile and well sculptured features. No one can fail to recognize the striking force and impressiveness of his countenance as it is reproduced with wonderful fidelity in Ghiloni's life-like bust in bronze, that is so greatly admired in our library.

As a teacher, with capacity to reach the intelligence and awaken the interest, pride and enthusiasm of the students on the subject of his teaching,—he had no equal. Lucidity, accuracy of speech, earnestness and wealth of illustrations, were his dominant characteristics. He was equally at home in dealing with the crudest unprofessional audiences as with the most critical experts. When he spoke, attention and interest never lagged. As Dean, he was preeminently successful in carrying the school through a difficult period of evolution, conserving the principles of medical pedagogics, and he laid a stable foundation for the greater superstructure that was made possible through the added financial resources that came at the close of his administration, in 1908, through the philanthropy of Mr. Hutchinson, and, later, the great Educational Foundations. He never trusted to chance, and his success as an administrator and executive officer, during the 21 years of his Deanship, was the result of preparation, by arduous and conscientious study of the problems that were brought to him for discussion and decision. As an administrator, he never indulged in idle dreams, but dealt with stern realities. A profound student of medical education in this country, he was always conservative, yet progressive. This was in harmony with one of his favorite maxims: "One of the most frequent causes of bitter disappointment and disaster in all the practical affairs of life is the overestimating of receipts and the underestimating of expenditures."

It was in his relations with the students, as Dean, that he displayed his remarkable control of men and his capacity to play upon their sensibilities. An admonition or a reprimand from him, in a few words, was far more effective than an hour's sermon on behavior from others. His tongue often wielded a lash which stung to the quick and startled the offender into an immediate realization of his guilt; then, when the effect had been obtained, he would dismiss the culprit with a final remark or two that proved a soothing balm, so blended with mercy and gentleness that the guilty student felt grateful for the lash.

A mere glance at Dr. Chaillé's bibliography, embracing a list of 160 titles, impresses us with his catholic type of mind and the universality of his interests. While this large bibliography only partially and inadequately represents the sum of his literary activities and his prodigious industry, it amply suffices to establish Dr. Chaillé's enduring reputation as an expert in State medicine, medical jurisprudence, medical organization, medical education, hygiene, sanitation and, especially, yellow fever, of which his encyclopedic knowledge justified his rank as the foremost student of the disease in his day. As an advocate of municipal hygiene, as applied to New Orleans, his leadership contributed to many sanitary reforms and, through his powerful pleas for the teaching of the elements of Physiology and Hygiene in the public schools, he is justly credited with the introduction of these branches of instruction into their curricula.

His gifts as an orator and public speaker are universally recognized, and when roused by patriotic fervor, as was well illustrated by his address of welcome to the medical officers of the Confederate Army and Navy, held in New Or-

leans in 1903, he could touch the heartstrings of men with as much feeling and responsiveness as a great virtuoso could evoke emotions by his inspired playing upon a musical instrument. No one can read this address without being thrilled by the exalted patriotic idealism of the orator, the beauty of his thoughts, his profound sympathy with his comrades, and his undying loyalty to the "lost cause."

As a rule, Dr. Chaillé never affected oratory nor strove for eloquence. As has been truly said, "He was always too much in earnest; his purpose was to convince, and he made use of his natural gifts of expression simply as a means to that end, in good, sound, sturdy English."

A large volume could be filled with Dr. Chaillé's sayings and quotations from his writings, in which his wit, wisdom and philosophy of life would sparkle as gems in a coronet resting upon his intellectual brow.

Much has been done to commemorate his memory,—a Chaillé Laboratory of Hygiene; The Chaillé Memorial Session, by the State Society; a Chaillé building; the beautiful bust by Ghiloni, and now this annual course of scientific lectures, established by the Parish Society and so admirably inaugurated by Dr. Whipple.

All this is well, but to those of us who knew Dr. Chaillé and who profited by his teachings, his example and his friendship, nothing can add to his fame nor to the splendor of his achievements. Speaking, personally, I feel that distance and time have only magnified his image and intensified my admiration.

In behalf of Dr. Chaillé's friends, pupils and former associates, I congratulate the Society on the brilliant success of this inaugural night and thank Dr. Whipple for detaching himself from his busy clinics and laboratories in New York, to contribute his admirable scientific labors to our enlightenment in a new and unthreshed field of medical investigation, and to add dignity to an occasion in which we have assembled to render homage to one of our immortals.

A STUDY OF THE CESAREAN SECTIONS PERFORMED IN THE HOSPITALS OF NEW ORLEANS FROM 1921 THROUGT 1926.*

By the New Orleans Gynecological and Obstetrical Society.

Some months ago it was decided by the New Orleans Gynecological and Obstetrical Society to undertake a survey of the Cesarean sections performed in the hospitals of the city over a period of years, with a twofold idea: first, that statistical studies along definite lines offer the only satisfactory method of checking our collective results, upon which, rather than upon our individual results, the real value of any given procedure must be estimated; and second, that a report of this type would be of interest to the profession in general as well as to physicians whose field is limited to the specialty of obstetrics.

Cesarean section was selected as the subject of this investigation, which we hope will be followed by others along similar lines, because we believed it well to evaluate our own performance in an operation about which so much discussion has raged. The six year period, 1921-1926, was chosen because it is sufficiently long to make our figures representative, and for the very practical reason that the records prior to 1921 are not of a type to be helpful in an investigation where details are essential.

It might be well, at this point, briefly to record our opinion of the records we handled. There is no question but that they have shown a progressive improvement in the last six years, although it is equally beyond question that there is still room for improvement, particularly in private hospitals. The records of Charity Hospital are on the whole good, for the reason that the internes there are held responsible for securing complete data on every patient, while in the average private hospital, they are not only not compelled to do this, but are usually not permitted to make complete examinations. The responsibility for completing the records is thus put squarely up to the visiting man, and, although his private records are doubtless complete, he fails to transfer his data to the hospital chart, an omission which does him a great disservice in such a survey as this. Indeed, it is not possible to comprehend how de-

*Read before the Orleans Parish Medical Society, January 24, 1927.

fective even the best of our records are until one works with them, as we have done. I might say that in every instance we have based our calculations upon and drawn our conclusions from the facts stated in the records; never did we supply omitted data, however easily it might have been done.

The basis of this study is two hundred ninety-one Cesarean sections from the six hospitals represented in our membership, Baptist, Charity, Hotel Dieu, Mercy, Presbyterian and Touro. For purposes of comparison we have secured the gross figures from Flint-Goodrich Hospital and the Woman's Dispensary also, and table I therefore represents the actual incidence of Cesarean section in hospital practice for six years (1.8 per cent), as well as in the city generally (.000484 per cent. The highest number, one hundred nine, were performed at Touro Infirmary, where the incidence, however, was only 2.7 per cent, while the highest incidence (5.4 per cent) was at Presbyterian Hospital, where the number of operations totalled only thirty. The lowest incidence, (1.2 per cent) was at Charity Hospital, and in view of the number of abnormal cases handled in the wards there it is worthy of comment, as Williams puts it, that so many operative possibilities should have been permitted to escape. The incidence figured for both the Baptist Hospital and Mercy Hospital is hardly fair, since these institutions have been functioning only a relatively short time.

Table II illustrates the age, the parity and the stage of gestation of the patients in the series. The relative youth of the women and the very high percentage of primiparae should both be commented upon in view of the fact that a first Cesarean introduces at least the possibility of another abdominal delivery in a subsequent pregnancy, a consideration it is well to bear in mind when weighing the relative advantages of vaginal and abdominal delivery, provided, of course, that vaginal delivery is feasible. Both the thirteen year old patients were from the colored service at Charity Hospital, the indication being disproportion in one case, probably due to under-development of the bony pelvis, and eclampsia in the other.

Nearly 20 per cent of the patients were not at term, and the stage of gestation ranged as low as five months. Since it is the general opinion that most complications of pregnancy necessitating evacuation of the uterus may be successfully handled before term by the vaginal route, and since the death rate in premature children is so high, it seems, on the surface, unfair to the mother to subject her to the risk which any Cesarean operation involves, for the sake of a child whose viability is doubtful.

Table III illustrates the abnormal deliveries which these women had previously undergone, many of them obviously suggesting that vaginal delivery should never have been attempted originally. In several patients more than one type of previous difficult or operative delivery is recorded, and over one-sixth had previously been delivered by Cesarean section. Frequently, particularly in eclampsia and the other toxemias, and placenta previa, many of the multiparae studied had had previous normal deliveries.

Table IV deals with the operative side of the study. More than a quarter of the operations were performed by three men, and nearly three-quarters of the cases described were done according to the classical technique. Since most of the cases not described were done in the first years of the investigations, they were probably done according to this technique also. The miscellaneous group includes the various types of transperitoneal and extraperitoneal operations not described in sufficient detail for accurate classification. The majority of the cervical operations (the laparotrachelotomy popularized by Beck, DeLee and others) were done in 1925 and 1926, and more than half of them were

done on the same service. The small incidence of the Porro operation (4.2 per cent) is rather surprising when we consider the comparatively large number of grossly and potentially infected cases studied, and also when we consider the popularity of this operation under the same circumstances in certain other clinics.

In view of the comparatively large number of repeated Cesarean operations (in several instances three) the fact that only 11 per cent of the women in the series were sterilized shows a decided degree of conservatism. It is regrettable that the record of the case in which appendectomy was performed in the course of a Cesarean operation done on the indication of eclampsia is not sufficiently full to give us the reasons for this decidedly unusual procedure. In the case in which complete hysterectomy was done for carcinoma of the cervix, the patient was admitted after a twenty-four hour labor, with a dead baby, and an absolutely undilatable cervix, so that vaginal delivery, even after craniotomy or embryotomy, could never have been achieved. A rush diagnosis was made of an excised specimen from the mass, and complete hysterectomy was done after the child had been removed from the uterus. It may be of interest to add that this patient remained well for two years, but has recently been examined and been found to have a recurrence in the vaginal vault.

Table V, dealing with the position, the measurements and the previous scars, excellently illustrates the omission of essential details in the records, to which we have already referred. No obstetric record, no matter what the type of delivery, is complete without a statement of the presentation of the fetus, yet in more than half of these cases it was not even mentioned. In other instances two and three different positions appeared on the same chart. The incidence of transverse presentations, ordinarily estimated at three per thousand is extraordinarily high in this series, fourteen out of one hundred fifty-four stated. Again, no obstetric record is complete without measurements, and when these are omitted in half of all the cases, and, more particularly, in a third of the cases in which pelvic contraction was the indication, the omission is hard to condone. In three instances the measurements given for cases in which the indication was pelvic contraction show the diameters of the pelvis apparently entirely normal. Furthermore, some of these measurements evidence very grave degrees of contraction, of a type relatively infrequent, at least among the white women in this community, because of the small incidence of rickets and other diseases which commonly cause such deformities. Because so many of the patients were permitted to go through long labors before operation was resorted to, we are inclined to believe that many of these extreme figures are erroneous, and that the contraction in many cases was really of the borderline type, where the test of labor was warranted. In other instances of repeated Cesarean section the measurements of the same patient in the course of a year or two varied as much as 4 cm. in diameters supposedly estimated by the pelvimeter.

The fact that in only nine cases, exclusive of the four cases of rupture, was the scar of the previous operation adequately described, is almost a calamity, since studies of large series of scars will eventually be our real basis for determining, other things being equal, just what element of risk vaginal delivery holds for a patient previously delivered abdominally.

Table VI and table VII, dealing with the duration of labor, the number of examinations, the rupture of the membranes and the previous attempts at delivery, would seem to indicate that in a fairly large number of cases the operation was an emergency procedure, done as a last resort. These figures are particularly worthy of analysis, since the dangers of Cesarean section are well known when it is performed

after prolonged labor, repeated examinations, attempts at delivery, and dribbling away of the amniotic fluid. In one instance the operation was done after labor had reached the second stage, and conversion, forceps, version and craniotomy had all been attempted unsuccessfully, while in another instance it was done after a seventy-two hour labor, when forceps, version and manual dilatation had all failed. In both instances the Porro operation was done. The case in which the previous Cesarean scar ruptured after the third dose of pituitrin is also worthy of special mention; operation was done six hours after the rupture had occurred, and death ensued twelve hours later.

Table VIII illustrates the various indications, roughly classified, for which abdominal delivery was undertaken. One case is frequently classified under several headings, as for instance, "contracted pelvis and previous Cesarean," "contracted pelvis and disproportion," etc. The indication of deformities of the bony pelvis, the most usual indication for this type of delivery, appears in one-third of the cases. Eclampsia, responsible for one-sixth, appears but rarely after 1922. Many of the indications, unless there were circumstances other than those stated on the records, seem of insufficient weight to warrant laparotomy. Fetal anencephalus and hydrocephalus and such indications as "obstructed outlet," "ossified symphysis pubis," "arthritis of the ankle," "adhesions," "health wrecked by childbearing," "patient's own desire," "patient's desire for sterilization," all of them quoted verbatim from the charts, seem scarcely sufficient reasons for resorting to abdominal delivery.

Table IX illustrates the postoperative course, distension, vomiting and fever being included in the figures only when they were troublesome features of the convalescence. The fact that nearly two-thirds of the patients had what must be classified as a febrile convalescence is worthy of comment in view of the fact that one of the indications for a second Cesarean is this very type of convalescence.

Table X illustrates the complications in the series, excluding deaths. One thing which impressed us as rather unusual is the occurrence of three postoperative vaginal hemorrhages, to which must be added two others which do not appear in this table, as the cases terminated fatally. Dilatation of the stomach, in some instances of a very serious type, was a feature in seventeen, all of them after the classical operation. Endometritis of a type severe enough to demand curettage on the twelfth day postoperative is also rather unusual. The postoperative convulsions all occurred in patients who had had one or more seizures prior to delivery.

Table XI is an analysis of the maternal mortality according to the actual causes of death. It is the opinion of the committee, however, that these are not in all instances correct. We believe, particularly, that peritonitis is unquestionably responsible for a larger number of deaths than are credited to it here, since it is so frequently a complication of such conditions as placenta previa and rupture of the uterus, and also so frequently a complication in Cesarean section done in neglected labors. The percentage of embolus is rather high, but in each case a careful study of the symptoms showed that the diagnosis was warranted.

Table XII, which shows the maternal mortality according to the indications for operation, offers overwhelming evidence that eclampsia, with a death rate of 41.5 per cent, is not best handled, at least in the convulsive stage, by Cesarean section. The low death rate in placenta previa was rather surprising to us in view of the possibilities of infection which this complication introduces. The one case lost in which cervical scar tissue was an indication, was a patient admitted after a mismanaged labor of twenty-four hours, who died

suddenly on the table, unquestionably from embolus, as the last sutures were being tied. Both patients with fibroids died; one was admitted definitely infected, after a neglected labor whose duration was not stated; in the other, the operation was elective, myomectomy was done also, and death followed from acute dilatation of the stomach.

Table XIII analyzes, so far as the records permit, the maternal mortality according to the duration of labor, the rupture of the membranes, and the previous examinations and vaginal manipulations. In spite of the lack of complete figures, it is quite apparent that the death rate in Cesarean section increases in direct proportion to the length of time the membranes have been ruptured, the number of vaginal examinations, and the attempts at previous delivery. In twenty of the twenty-four cases in which labor had not begun (five-sixths of the total) the indications were mainly eclampsia and death was attributable to this cause.

Table XIV is an analysis of the fetal mortality. One striking point is that the comparatively low maternal death rate in placenta previa, less than 10 per cent, is more than offset by the very high fetal mortality, nearly 40 per cent, more than half of which could be attributed to prematurity. Four of the six cases of premature separation of the placenta resulted in dead babies, as did seven of the twelve cases of toxemia, and 20 per cent of the babies born of eclamptic mothers were either stillborn or lived but a few hours. More than 36 per cent of the total fetal mortality occurred in premature infants. It should be emphasized also that while certain developmental errors are impossible to diagnose before delivery, as for instance the case of congenital fetal anasarca in this series, when such conditions as hydrocephalus and anencephalus are diagnosed beforehand, Cesarean section is not warranted from the standpoint of the child, while it adds materially to the mother's risk.

Table XV is a statement of the maternal and fetal mortality over the six year period. Although the maternal mortality is still very high, and indeed out of all proportion to the risk which the average abdominal operation should carry, and although the fetal mortality is still beyond the average, both have shown a gratifying decrease in recent years, a decrease which undoubtedly is attributable to the wiser selection of cases, the choice of safer methods in infected patients, and the elimination of eclampsia as an indication.

Table XVI, which shows the comparative figures at Charity Hosptal for the last ten years, we believe may be considered fairly representative of the general situation in New Orleans. In 1919 and again in 1921 the high water mark of Cesarean incidence was attained; since then it has been steadily dropping, and for the last four years it has been in the neighborhood of 1 per cent, which is below the incidence of the average clinic. During those same years the gross maternal and fetal death rates have shown progressive decreases, and we believe this not only indicates that few if any patients are being deprived of the operation if it is honestly indicated, but also that the wiser selection of cases, plus the elimination of eclampsia as an indication, plays a decided part in this improvement.

CONCLUSIONS.

1. If these figures are correct, the profession in New Orleans is to be congratulated, since the local incidence of Cesarean section is considerably under that reported from most other clinics.

2. In view, however, of the exceedingly high mortality of the operation generally, and because of the fact that even elective section carries a definite and inevitable risk, it is not an operation to be performed except on strict indications.

3. These figures further confirm the already established fact that operation on promiscuous indications, and particularly

in neglected cases, after rupture of the membranes and vaginal manipulations, carries a very high maternal and fetal mortality.

4. Since the figures for the last ten years at Charity Hospital, which may be taken as typical, show that the gross maternal and fetal mortality have been progressively lowered, it would not seem, in spite of the progressively lower incidence of Cesarean section, that patients are being deprived of this operation when better results could be achieved by it than by vaginal methods of delivery.

5. The fact that both the maternal and fetal mortality after Cesarean section have shown a gratifying decrease in the last three years may be attributed to a wiser selection of cases, the occasional employment of the Porro operation in grossly infected cases, and the routine employment, on certain services at least, of the low cervical operation (laparotrachelotomy) in potentially infected cases.

6. In view of the comparatively low mortality following the Porro operation in grossly infected cases, it would seem the part of wisdom to employ it in such cases, when vaginal delivery is impossible, even with a dead baby.

7. In view of the fact that the thirty-one cervical Cesarean sections (laparotrachelotomy) performed in this series had a zero maternal mortality, even when infection was undoubtedly present, it would seem wise for surgeons contemplating Cesarean delivery in the future to familiarize themselves with its technique, especially as the convalescence is almost invariably smoother than after the classical operation.

8. In view of the fact that, given a fairly normal pelvis, the average case of malposition (breech, transverse, occipito-posterior, etc.) can be delivered satisfactorily by the vaginal route, it is not apparent that malpositions per se furnish an adequate indication for Cesarean section.

9. In view of the extremely high fetal and maternal mortality for eclampsia when Cesarean section is done in the convulsive stage, this indication cannot any longer be considered a justifiable one, particularly as the gratifying improvement in the maternal mortality, at least, in recent years, is undoubtedly due to its elimination as a routine indication.

10. In view of the fact that the death rate among premature infants in this series is over 36 per cent, it would seem that the mother's safety should be the paramount consideration in deciding upon the treatment of any complication of pregnancy before term, and that the child should be only a secondary consideration.

11. While the comparatively low maternal death rate in placenta previa, three out of thirty-three cases, suggests the wisdom of its use occasionally, provided infection be definitely eliminated, the high death rate among infants thus delivered suggests that Cesarean section should seldom be performed in the interest of the child unless the patient is at or near term, and that the mother's safety should be the paramount consideration in deciding upon methods of treatment.

12. Since rupture of the previous scar in subsequent pregnancies is a real possibility, the incidence being variously estimated at from 4 to 18 per cent, according to the method of calculation (8 per cent in this series), the risk to which the patient is subjected by this catastrophe should always be borne in mind when various modes of delivery are being weighed.

13. The fact that only three operations in the entire series were done under local analgesia suggests that it might be well to advise a wider employment of this type of anesthesia, particularly in debilitated and toxic patients.

RECOMMENDATIONS.

1. A maternal death rate of even 10 per cent is too great a risk to which to expose parturient women, and we would suggest that careful consideration of the following points in every instance in which Cesarean section is contemplated will aid materially in reducing it:

a—Operation only on strict and established indications.

b—Consideration of the possibilities of vaginal delivery before abdominal delivery is decided upon in the non-elective cases.

c—Strict differentiation of cases into infected and non-infected, the former being handled by the low cervical (laparotrachelotomy) or the Porro operation, according to indications.

d—Delivery by the vaginal route in those cases where the complication of pregnancy which demands prompt evacuation of the uterus may be handled with equal safety to the mother by this method, particularly when the child is premature and its viability doubtful.

2. We would suggest to the staffs of the various hospitals the use of a form (table XVII) similar to the one employed in this study as an integral part of each Cesarean record, and we would further suggest that the supplying of all the details thereon be made the responsibility of the operating surgeon in each case.

Respectfully submitted,

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Committee.

TABLE I.

Hospital	1921	1922	1923	1924	1925	1926	Total	Rate
Baptist								
Cesareans	.....	.....	.....	.....	.....	6	6	.....
Deliveries	.....	.....	.....	.....	.....	213	213	2.8
Charity								
Cesareans	24	16	8	12	12	15	87	.....
Deliveries	917	994	1097	1298	1358	1453	7117	1.2
Hotel Dieu								
Cesareans	5	14	2	4	10	9	44	.....
Deliveries	420	294	472	535	597	537	2855	1.5
Mercy								
Cesareans	.....	.....	.....	2	9	4	15	.....
Deliveries	.....	.....	.....	115	172	223	510	2.9
Presbyterian*								
Cesareans	.....	9	6	6	5	4	30	.....
Deliveries	.....	87	146	141	113	63	550	5.4
Touro								
Cesareans	21	18	11	16	21	22	109	.....
Deliveries	482	493	591	668	892	919	4045	2.7
Flint-Goodrich								
Cesareans	2	2	.....	.....	3	.....	7	.....
Deliveries	25	32	42	42	51	45	237	3
Woman's Dispensary								
Cesareans	.....	.....	.....	2	.....	.....	2	.....
Deliveries	.....	152	122	180	163	179	796	.025
Total								
Cesareans	52	59	27	42	60	60	300	.....
Deliveries	1844	2052	2470	2979	3346	3632	16323	1.8
New Orleans Deliveries	10086	10162	10268	10870	10139	10441	61966	.000484

*13 Cesareans performed at this hospital in 1921 have not been included in this report for lack of sufficient data.

TABLE II.

Age	
Youngest	13 (2)
	15 (2)
	16 (2)
Eldest	45 (2)
20 to 35	75.8%
Parity	
Primiparae	55.8%
Para 14	1
Stage Gestation	
5 months	1
(placenta previa, Porro)	
Term	81.4%

TABLE III.

Type Previous Labors (Abnormal)		
Forceps	(1 to 4)	36
Version		5
Stillbirths	(1 to 4)	35
Craniotomy	(1 twice)	4
Prolapsed cord	(same patient)	2
Cesarean	(5 twice)	50

TABLE IV

Number of Surgeons	60
Highest number	27 (1)
	26 (2)
One each	20
Technique	
Classical	175 (72.0%)
Cervical	31 (12.7%)
Porro	10 (4.2%)
Miscellaneous	27 (11.1%)
Not stated	48 (16.5% of total)
Length of Operation	
Longest	105 minutes
Shortest	15 minutes
Average	47 minutes
Other Operations	
Resection tubes	32 (11%)
Myomectomy	1
Complete hysterectomy	1
(Carcinoma cervix)	
Appendectomy	1
(eclampsia)	

TABLE V.

Position		
Not stated		52.9%
Vertex	(of those stated)	75.9%
Transverse	(of those stated)	10.2%
Measurements		
Not stated		50.2%
Not stated in contracted pelvis		33.6%
Previous Scars—50		
Ruptured		4
Inadequately described		10
Microscopic examination		2
Not mentioned		27

TABLE VI.

Duration of Labor		
Elective		18.2%
Not begun		17.5%
Aseptic test		8.2%
Begun		50.0%
Doubtful		6.1%
Duration under 5 hours		6
Duration over 75 hours		2
Examinations		
Not mentioned		85
None (stated)		19
Rectal only		7
One examination		45
Nine examinations		1
Membranes		
Not mentioned		262
Not ruptured (stated)		5
Ruptured		24
Under 5 hours		6
Over 45 hours		3
Previous Attempts at Delivery		
Pack	(5 in 1 case)	7
Forceps	(1 high)	5
Version		2
Combined version		1
Craniotomy		1
Excision cervical tissue	(carcinoma)	1
Artificial rupture membranes	(maternal hydramnios)	1
Douche		1
Manual dilatation		1
Bag		1
Pituitrin		1
(3 doses, previous Cesarean, rupture scar)		

TABLE VIII.

Indications		
Contracted pelvis		107
Eclampsia		41
Other toxemias		12
Placenta previa		33
Premature separation placenta		6
Disproportion		16
Previous Cesarean		24
Malposition		14
Inertia—prolonged labor		28
Dystocia		3
Cervical scar tissue		10
Age, primiparity	(37 to 45)	9
Prolapse cord		2
Rupture uterus		1
Rupture Cesarean scar		4
Cardiac lesions		4
Old tuberculosis		2
Carcinoma cervix		1
Fibroids	(both died)	2
Impending uterine rupture		1
Exhaustion		2
"Obstructed outlet"		1

"Ossified symphysis pubis"	1
Fetal anencephalus	1
Fetal hydrocephalus	1
Laparotomy during pregnancy	1
"Adhesions"	1
Obesity	1
Sacculation post. uterine wall	1
"Health wrecked by childbearing"	2
Arthritis ankle	1
Patient's desire	1
Desire for sterilization	1
Abdominal pain (7 months)	1
Previous obstetrical history	15
Not stated	2

TABLE IX.

Postoperative Course

Distention	36.9%
Vomiting	27.4%
Fever—	
Under 100	52
To 107	3
Beyond 3 days	63.5%

TABLE X.

Complications (excluding deaths)

Pulmonary	9
Kidney and bladder	8
Dilated stomach	17
Postpartal convulsions	5
Postoperative vaginal hemorrhage	3
Parametritis	1
Vulvovaginal abscess	1
Retained lochia	1
Vaginal hematocele (aspirated)	1
Sapremia	1
Staphylococcal endometritis (curetted)	1
Phlegmasia alba dolens	5
Wound infection	11
Ruptured wound	1
Psychosis	1
Mastitis	2

TABLE XI.

Maternal Mortality (analyzed as to causes of death) 47—16.1%.

Peritonitis	6
Septicemia	3
Rupture uterus	3
Eclampsia	16
Toxemias	3
Placenta previa	1
Premature separation	1
Acute dilatation stomach	2
Pneumonia	1
Vaginal hemorrhage (postoperative)	2
Heart lesions	2
Embolus	5
Doubtful	2
Total	47

TABLE XII.

Maternal Mortality (analyzed as to operative indications)

Contracted pelvis	(out of 107)	8
Eclampsia	(out of 41)	17
Other toxemias	(out of 12)	3
Placenta previa	(out of 33)	3
Premature separation placenta	(out of 6)	1
Disproportion	(out of 16)	1
Inertia—prolonged labor	(out of 28)	5
Cervical scar tissue	(out of 10)	1
Rupture uterus or scar	(out of 5)	3
Cardiac lesions	(out of 4)	2
Fibroids	(out of 2)	2
Not stated	(out of 2)	1
Total		47

TABLE XIII.

Maternal Mortality (analyzed as to duration of labor)

Elective		3
Test		1
Not begun	(mainly eclampsia)	20
Begun		23
Examined	(1 to 6 times)	15
Many others not stated		
Membranes ruptured	(stated)	4
Pack		1
Attempts at delivery— (forceps, version, craniotomy)		3
Fever at operation		2

TABLE XIV.

Fetal Mortality—55—18.9%.

Pelvic contraction— (1 attempted high forceps)		2
Eclampsia	(4 premature)	8
Placenta previa	(9 premature)	13
Premature separation placenta— (1 premature)		4
Neglected labor	(1 premature)	6
Congenital malformations— (1 X-ray diagnosis)		4
Toxemias	(4 premature)	7
Rupture uterus or scar		5
Tonic contraction uterus		1
Cerebral hemorrhage	(placenta previa)	1
Prematurity		1
Uterine fibroids		1
Doubtful		2
Total	(20 premature)	55

TABLE XV.

Total Mortality (by years)

	Maternal	Fetal
1921	22 %	20 %
1922	26.3%	21.5%
1923	11 %	22.2%
1924	12.5%	17.5%
1925	14 %	14 %
1926	10 %	10 %
Total	16.1%	18.9%

TABLE XVI.
COMPARATIVE FIGURES 1917-1926
CHARITY HOSPITAL

Year	Deliveries	Cesareans	Rate	Maternal Mortality	Rate	Fetal Mortality	Rate
1917.....	676	13	1.9	17	2.5	97	14.3
1918.....	614	11	1.8	21	3	84	13.7
1919.....	581	30	5.1	12	2	74	12.7
1920.....	680	13	1.9	19	2.76	86	12.6
1921.....	917	24	2.6	28	3.05	107	11.7
1922.....	994	16	1.6	24	2.41	101	10.2
1923.....	1097	8	.073	27	2.46	132	12
1924.....	1298	12	.093	23	1.7	117	9
1925.....	1358	12	.088	23	1.69	109	8
1926.....	1453	15	1	15	1.03	119	8

TABLE XVII.

New Orleans Gynecological and Obstetrical Society.

Hospital Patient's initials Operator
Date of admission Date of operation
Date of discharge Age Parity
Stage of gestation Position
Character previous labors
Pelvic measurements
Indications for operation
Stage of labor
Previous examinations and attempts at delivery
Anesthetic Length of operation
Technique
Other operation at same time
Indications for sterilization (if done)

Post-operative vomiting Duration
Post-operative distention Duration
Maximum temperature
What day post-operative
Duration of temperature elevation
Complications
Maternal mortality
Fetal mortality
If second operation, describe condition of previous scar.

DISCUSSION.

Dr. Jennings C. Litzenberg (Minneapolis): In endeavoring to make this discussion general and avoid comment on the figures, I am reminded of the old rhyme:

"Mother, may I go out to swim?
Yes, my darling daughter,
Hang your clothes on a hickory limb,
But don't go near the water."

So I will discuss the report, but as requested won't touch upon the figures. I do not know whether they were afraid I would jump on them for the figures or not, so will eliminate them from the discussion, but may I discuss methods of carrying out the recommendation? It is a significant fact that in the hands of well trained obstetricians the death rate is under 2% as compared with 16% in this report.

The first recommendation: That Cesarean section be done upon a definite indication or, I with the greatest temerity suggest, that the general surgeon and practitioner cannot properly judge in these instances since they have not the precise knowledge to determine all the facts. The general surgeon can do just as good an operation as the obstetrician, he might do better, but it takes a minute and exact study of the case to know whether or not the operation is indicated, else few of these operations would have been performed. Of all the methods of the treatment of eclampsia, Cesarean section is the worst. This has been repeatedly borne out by statistics. In 1922 in England an investigation was made. Their report that rarely is Cesarean required for eclampsia was simply a reiteration of the statement which Dr. Whitridge Williams had so often made prior to their investigation. Therefore, eliminating eclampsia and some of these other reasons given for this operation, in which it was obviously not indicated, the necessity for performing a Cesarean section become very much reduced. I thnk you are to be congratulated on your courage, in making such a Committee investigation.

Now, may I make a suggestion as to how to carry it out. I do part of my private work in a certain hospital where no one is permitted to perform a Cesarean without obstetrical consultation. The hospital makes that rule, the choice of the consultant is left to the one handling the case. A man walked into this hospital prepared to do a Cesarean. He had six assistants. When asked why he was going to perform this operation he stated that his patient had been sent to this hospital the night before by a country physician who had recommended Cesarean section in her case but the surgeon had not examined her. When told that he could not do it unless he consulted an obstetrician he got mad and left the hospital. Later I had all I could do to get there and catch the baby. That is a good rule.

A few days before I left a committee from another hospital asked me if I would become chief consultant at that hospital. I accepted on one condition—that no therapeutic abortion be done without two consultants and no Cesarean without consulting a trained obstetrician. One of our general surgeons, a good friend of mine, did a Cesarean. "You did not have any business doing that operation without a consultation," I told him. He replied: "I was practising obstetrics before you graduated." "Yes," I said, "you are prac-

tising the same kind you learned before you graduated." He laughed and said: "You are right, every case should have obstetrical consultation and hereafter I shall follow your recommendation."

May I one more recommendation which I forgot to make at the end of my talk on endocrines? All of these fictions about the endocrines will gradually be replaced by facts, and while overian therapy in the human is not as satisfactory as it might be, we will discover the proper method. It may be a matter of years before this is accomplished, but I am convinced that sooner or later we will be able to concentrate our two kilos of ovarian substance into a tablet of sufficient potency to have a therapeutic value.

Dr. Ernest S. Lewis: While surprised at the number of Cesarean operations that are being performed since I have withdrawn from the obstetrical field, the reasons given for the performance of this operation are a still greater surprise. Was there no history of tedious labor in the shoulder and breech presentations in which this operation was adopted? As an obstetrician—it is true one who retired ten years ago and who has not kept up with the literature since that time—I must say that the operation is being very much abused. Something, as Dr. Litzenberg has just remarked, should be done in all our hospitals and no Cesarean should be permitted in them without consultation, with an obstetrician, not a surgeon. Surgeons are grasping. I remember when I began and developed gynecology—as one of the pioneers I did also a good deal of general surgery—my friends hinted (the surgeons I mean) that if I would confine myself to gynecology they would send me their cases. This they did for a few months until they learned how to perform these operations, then they included the female organs as part of their surgical work and the practice obtains to this day.

Knowing there are others not quite so archaic as myself who wish to discuss the subject, I will close my remarks.

Dr. C. Jeff Miller: We have suspected for some years that Cesarean section was being performed with unnecessary frequency, but it is only relatively lately that we have awakened, largely through such reports as this, to the real abuse of the operation. The obstetric indications for its performance are definitely established, and it is only among those who refuse to accept these indications, which have been built up by long experience, that the abuse is prevalent. It required, for instance, a long and painful experience to prove that the indications for Cesarean section in eclampsia were extremely limited, and that the mortality of the disease, plus the mortality of the operation, gave a death rate which practically prohibited its performance. The mortality for eclampsia when treated by Cesarean ranges as high as 40 and 50 per cent, and conservative treatment has given a mortality, in some clinics, at least, as low as 3 per cent, which makes further argument unnecessary.

Cesarean section has also been abused in the management of placenta previa. If the patient is at term, if the bleeding has not been excessive, if she is a primipara, if one can eliminate infection, at least as introduced by unwise management, then Cesarean section may be justified in the occasional case. But placenta previa occurs most frequently in the multipara, before term, and the majority of these patients are infected, before they reach the hospital, by unwise management on the outside, so that in the average case an abdominal operation is definitely contra-indicated, quite aside from the fact that other methods of treatment give better results.

I note from the report that 11 per cent of these patients were sterilized, which at once raises the question of when this procedure is justifiable. It is my own practice never to sterilize a patient after her first section unless some serious constitutional disease or organic lesion makes future pregnancies unsafe. After the second section, if the first child is living and well, and it is the wish of the husband and wife, I think sterilization is justified. It is well, however, not to be too radical in this matter, and it is particularly unwise to advise resection of the tubes after the first section. Three times within the last two years I have been consulted by women whose tubes were resected after their first Cesareans; in each instance the first child died later, and all of these women were desperately eager for other babies.

Since the introduction of the low technique the indications for Cesarean section have safely been widened. For the last three years I have used this technique almost exclusively, and I have had no fatalities. Among these patients were some women advanced in labor, who, I am sure, would have died had the classical operation been employed. In all cases the convalescence is smoother. One point which cannot be emphasized too strongly, however, is that the good results of Cesarean section do not depend upon the technique alone. The reduction in mortality has been due partly to that, I admit, but it is due even more to the proper selection of cases. It is only by recognizing obstetric problems during the latter half of pregnancy and choosing the type of delivery to fit the situation that uniformly satisfactory results can be attained. If one studies the figures for Cesarean section collected from general hospitals and outside of well organized maternity services, one realizes the unwisdom of its reckless performance, for the mortality is such as to

place it among the most serious of abdominal operations.

Dr. E. L. King (closing): We have found that the adoption of the conservative method of treating eclampsia has reduced our mortality rate 1 to 8%. Regarding malposition, of itself, it certainly is no indication for Cesarean section—when complicated by a contracted pelvis, that is a different story. I believe that where malposition alone was given as the reason for this operation it was a question of a faulty record. Our survey shows that our records are capable of improvement, that they have improved considerably of late, and that there is still room for further improvement. More especially does this apply to the private hospital. The same thing, however, holds good in reviewing any set of records.

Sterilization, as Dr. Miller mentions, is something of importance. It is certainly the proper thing to do where a definite lesion of the heart, kidney, etc., exists. In other cases, where the indication is not clear-cut, differences of opinion regarding this procedure will obtain. When sterilization is contemplated it might be well (before it is performed) to obtain the written consent of husband and wife, this to be filed with the chart; later they might change their minds and want to know why it was done.

With regard to the closing of scars, Herbert Spencer says that he discontinued the use of catgut twenty years ago and uses interrupted sutures of silk, so that we must be twenty years behind the time. It is not so much a question of the closure or of the material, but rather the choice of the patient beforehand: a clean case will give a clean scar; an infected case will probably give an infected scar.

Low cervical section, we believe, is worthy of further trial, particularly in the infected cases. So many cases have been of the type where we could not use the classical section, *e. g.*, cases of contracted pelvis with ruptured membranes, and already infected, and we simply went ahead in the past with vaginal delivery as best we could, but since the low section has come into vogue we have used it in these cases and have been successful with it, saving both the mother and the child. In the cases of placenta previa the mortality of three out of thirty-three was rather low, but the fetal mortality was considerably higher. In placenta previa, at or near term, Cesarean section is generally indicated; most of the others can readily be handled by the vaginal route with good results. Particularly in the case of a primipara with a living baby at or near term and, of course, with freedom from infection, the indication is for Cesarean section. In such cases we would use the high operation rather than the low.

NON-SPECIFIC UPPER RESPIRATORY INFECTION IN CHILDREN.*

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This is a rather common subject, but since 1921, the mortality from this disease has exceeded that of diarrhoea, so it is well that it be given due consideration. Abt states that the increase is one of the penalties of civilization, and we know that in the last ten years while medical science has been reducing the mortality of diphtheria, typhoid fever, scarlet fever, and malaria, that, as for the respiratory infections, they have greatly increased.

This condition has been called a multitude of names according to location—otitis, bronchitis, laryngitis, tonsilitis, acute coryza, lagrippe, throat infections and upper respiratory infections. The word, "non-specific" is used to eliminate Vincent's angina, scarlet fever and diphtheria.

I find that this disease constitutes about 50% of my practice.

The general public does not fear the average infection of this kind, and often we do not see the original case, but one of the many serious complications or sequelae that may follow it.

ETIOLOGY.

So far no one has been able to isolate any specific organism, as the cause of this condition. We know that, about the 12th hour in a baby's life a culture shows a variety of germs. The culture from a normal throat shows staphylycoccus, albus, aureus, citreus, pneumococcus, bacillus influenza, Friedlander's bacillus, micrococcus, catarrhalis, non-hemolytic streptococci. No bacteria have been found in the early stages of the disease to which a causative role could be assigned.

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*Read before the North Mississippi Six Counties Medical Society, Oxford, Miss., November 10, 1926.

Late in the infections, secondary invaders, staphylycoccus aureus, hemolytic streptococcus, bacillus influenza, have been found in large numbers, especially was there a striking increase in the hemolytic streptoccoci.

There is no doubt that respiratory infections are about as contagious as measles, going through families and groups, and the disagreeable part of it is that instead of one case giving an immunity, it appears that one attack, predisposes one for a second and third attack, that is, if there is any immunity given from the disease it lasts only a few weeks.

A number of conditions appear to increase the number and virulence of this infection. Statistics from three-fourths of a million respiratory infections show that with a cold winter this disease increases 2 to 8 times, and in an exceedingly cold winter we treat three times as many children for this disease as in ordinary winter. Experiments on animals have proven that colds are worse in cold weather.

Some of the conditions that increase attacks of this disease are changes of atmosphere, prolonged exposure, excessive cold, disproportion in temperature and humidity, exposure of the body to different temperatures to that which you are breathing, changes of clothing, injuries and irritation of mucous membrane by smoke, dust and chemicals. There appears to be a decided individual and familial susceptibility. The common remark of "catching cold" is a very apt expression for there is no doubt that the throat and nose of children are lined with pathogenic organisms that are harmless under certain conditions, but with our modern room temperature, varying from 70 degrees to 80 degrees F. it takes considerable natural resistance from our patients, and thus any of these changes previously mentioned may allow the organism to gain a foothold and set up the disease.

When we lived in huts with the wind blowing through the cracks, and wore few clothes, we called constantly on nature to protect us and she answered our call, but now with our modern apartments and modern heating when we do call on nature, she knows us not, and fails to respond.

Whether these infections are acquired, endogenously or exogenously, all of them seem equally contagious.

We have these infections throughout all the year, though they are much more numerous in the colder months.

SYMPTOMS.

The large majority of these cases run a rather mild course. We have evidence of a sore throat, fever, running nose, cough, aching, and slightly enlarged cervical glands. The patient may not feel badly, often neither patient or mother realizes that the throat is sore. The fever will vary from 99 to 106 F. The mild cases generally last from 3 to 5 days.

This infection may set up with a convulsion and ranks with digestive indiscretions in causing a large percentage of convulsions in children.

We might divide these infections into, first: The mild cases; second, the serious cases. The serious cases we would divide into (a) the localized infections; (b) those spreading by continuity and contiguity to adjacent tissues; (c) systemic, and by bacteria and toxins, it may affect pathological changes in most any part of the body.

Often these serious local infections will come into the City Hospital; symptoms of running nose, red throat, tonsils enlarged, ear drums red, a few scattered mucous rales in chest, temperature, 104, respiration, 40, and on first examination, receive a diagnosis of broncho-pneumonia. The next morning temperature is normal, then back to 103, and it only receives diagnosis of upper respiratory infection, after a negative smear for malaria, negative urine,

negative x-ray of chest and negative chest clinically. Some of these cases may persist with rise of temperature for several months, without finding the location of the infection.

It may spread by continuity and contiguity in the throat and in older children produce a peritonsilar abscess. It may set up a retropharyngeal adenitis, with loud, moist, snoring obstruction to breathing—retracted head, absence of rigidity, unilateral cervical adenopathy. Cervical adenitis is often present in these infections, and in some epidemics the gland commonly suppurates. The glandular fever would come under this infection.

In many of these cases the ear drums are red and inflamed and otitis media is rather common with a certain proportion of mastoids. The infection may further spread, giving us a meningitis or an encephalitis.

It is only in the past few years that we have realized that it is very common for the infection to extend into the frontal maxillary, ethmoid and sphenoid sinuses, and these foci of infection are often the foundation for a chronic arthritis, nephrosis or parenchymatous nephritis.

From the throat, infection spreads down the trachea, often giving us a cough that lasts for weeks. It may extend further, giving us a bronchitis, broncho-pneumonia, pleurisy, empyema, lung abscess.

The infection may show itself as a stomatitis and we have gingivitis, redness, swelling, spongy and bleeding gums, with ulcers on lips, cheek and tongue. The conjunctiva is often the location of the infection.

One of the most common forms of this infection is the gastro-intestinal type. The child is vomiting, often a diarrhea is present, temperature 99, red throat. This receives the name of intestinal influenza from those who are prone to loose talk. What we have is ketosis; the germ has interfered with the digestion, and there is an excess of diacetic and oxybutyric acids, these combining, with sodium bicarbonate to lower the alkali reserve. This condition is often called biliousness, and receives a purgative, when it should have received large amount of fluids, water, orange juice, dextrose, pineapple juice, tea, toast, and cereals. No milk should be given for 24 hours, and then the cream should be removed.

In fact, the average so-called bilious attack generally means that this infection has localized as a foci in kidneys, tonsils, sinuses and other seats of chronic foci.

(c) In the third group of cases, we would include all cases in which there are symptoms referred to distant parts of the body, due to bacteria or to their toxins that have invaded the blood stream.

Under this head we have arthritis, osteomyelitis, nephrosis or nephritis, pyuria due to cystitis, pyelitis, pyelocystitis, pyelonephritis. We have also conditions involving the heart which may include endocarditis, myocarditis, pericarditis and chronic valvular disease. In the brain we may have embolism, thrombosis, encephalitis, meningitis, and abscess through invasion of the blood stream. The skin may give us urticaria, streptococcus infection, and a rash resembling very much that of scarlet fever often called the "flu rash." Appendicitis and peritonitis are sometimes the result of spread of this infection. The many cases of parenteral diarrhea are generally secondary to upper respiratory infection or its complications.

A very peculiar point about this infection is that the respective types appear to select some special location in the epidemics; that is, this week we have sore throats, next week otitis media, then again vomiting or diarrhea and vomiting, or they all may be systemic, with practically no localization, then a series of croups, or a series of more serious complications of meningitis, encephalitis, mastoiditis. There must be a number of different germs caus-

ing this condition, and there is a great variation in the virulence.

DIAGNOSIS.

In most cases diagnosis is easy, although sometimes it is very difficult.

There is sore throat, cough, running nose. The condition is generally epidemic, members of a family have same symptoms. The series of complications such as otitis media, cervical adenitis, laryngitis, is secondary to this infection. Conjunctivitis pyelitis, arthritis, gingivitis, petechial hemorrhages are suggestive.

This respiratory infection is not considered influenza, for we would hardly have an otitis media, stomatitis, tonsillitis, croup and real influenza in same family at the same time.

Brennerman states that "Influenza could well be looked upon in this connection as simply a peculiarly virulent and in epidemic form, characteristic infection of the type here discussed, that is, probably, due to one organism or association of organisms that is specific at least for each pandemic."

TREATMENT.

Prophylaxis includes proper diet of children in first few years of life. We find that children who have an excess of carbohydrates are predisposed to respiratory diseases.

Reduce the temperature in the house from 80 degrees to 68 or 70 degrees F. and keep the child out of doors as much as possible, at least two or three hours a day, except in very damp or windy days. It is a fact that children from the wealthy homes, who are protected from many diseases have more than their proportion of respiratory infections, due to their becoming hot house plants.

Keep up the vitality of the children. Often after one of the respiratory attacks, the infection localizes in kidneys, sinuses or elsewhere, and is allowed to remain as a foci. This child is underweight, anemic, has poor appetite and needs more attention than a child with temperature 102, for in that first case, nature has fallen down on the job and unless parents and doctors come to the rescue and bring the child back to normal, the child will be affected for life; while in the second case, nature will probably take care of the case in a few days.

Keep these cases separated from intestinal infections in hospitals, for often they come in as internal infections and go out with parenteral infection. Only a few weeks ago a post mortem on a difficult feeder gave us a double mastoid as the cause of death.

See that the children get enough of sunshine; if deficient in this, wherever possible, ultra violet should be used. All institutions for children should have ultra violet light, and it should be used routinely on subnormal children.

Give cod liver oil routinely from November to April, as it builds up the system, and cuts down the number of respiratory attacks. Vaccines do not give us sufficient results to recommend their use.

Adjust the clothes of the child to weather in this variable temperature.

As school inspector in Memphis, I have seen many children bundled up on a warm day in January, suitable for weather 40 degrees F. lower, and as a result every pore of the skin was open, inviting the disease.

They should wear less underclothes and more wraps, less woolen and more mixed goods, or cotton. Give nature a chance.

Adenoids should be removed whenever we have mouth breathers, poor appetites, malnutrition, repeated infections, deafness, nervousness or other like symptoms.

Now, as to tonsils, they were put there for the purpose of protection to the system, and they should only be removed when they have changed from an asset to a liability, and this cannot be judged by the size. In fact, the pediatrician or general practitioner who has had the child under his care, who sees him before and after attacks, and who knows whether there are other conditions present that might be attributed to the tonsils, is the party who is competent to decide.

It is not best to remove tonsils before the age of four, but this rule should be broken under certain conditions.

Do not promise that this will end the respiratory attacks for it will not. I believe that it reduces the number and sometimes shortens the duration of the attacks.

In the active treatment of these cases, I will only mention cardinal points of treatment of primary infection.

Put patient to bed early and keep them there. Do not purge. You may keep the bowels open with magnesia or enema.

Give fluids freely. Salicylate in form of aspirin may be given with syrup of orange and mucilage of acacia.

I believe that painting throat with 5% mercurochrome aids in these cases though some authorities do not agree. Nose drops of camphor and menthol in oil solution keep nose open and make patient more comfortable.

Temperature may be controlled with tepid sponges.

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COMPLICATIONS INCIDENT TO THE OPERATIVE TREATMENT OF INFLAMMATORY DISEASES OF THE GALL-BLADDER.

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During the last ten years, great advances have been made in the diagnosis and operative treatment of diseases of the gall-bladder and bile-ducts. Further development evidently is possible in diagnostic precision, timeliness and completeness of operative relief and obviation of recurrences. The unflagging inculcation of established facts and the combined efforts of internists, surgeons and laboratory workers have given us a more detailed understanding of the etiology, symptomatology, anatomical evolution and therapeutic indications of the various pathological processes of the biliary tract. Cholecystitis, acute and chronic, and its manifold complications call for operative relief. In the early stages of the disease, surgical therapy judiciously applied, will cure 66 per cent and improve 34 per cent of the cases which survive the procedure.[8] The study of the pathological processes of the upper right abdominal quadrant and of the operative procedures most suitable to this region has received a marked impetus from the beneficent results attending early operations. In inflammatory diseases of the gall-bladder and biliary passages, medicinal measures are almost always purely palliative; they are not curative. Dietetic, hygienic, physio-therapeutic and medicinal measures should precede, accompany and supplement the operative treatment of cholecystitis and its complications. To this dictum there should be no exception.

Gall-stones, irrespective of size, number, nature and location, lodged or impacted in the gall-bladder, in the cystic, hepatic or

common duct, or in a diverticulum, call for early operative removal. All collections of pus within the gall-bladder, bile-tracts or in juxta-position to the biliary system, call for early operative evacuation.

For the relief of cholecystitis, cholelithiasis, obstruction of the cystic duct, pericholecystic adhesions, etc., two operations, cholecystostomy and cholecystectomy, are generally performed. These two operations, judged by the results obtained, possess merits and have their respective indications,[5] limitations, difficulties of performance, operative and post-operative accidents, morbidity and mortality.

Greater precision in diagnosis, early and timely operations, better operative technic and judicious pre- and post-operative management of gall-bladder diseases have extended the indications of cholecystectomy, lessened its operative difficulties, improved its immediate and remote results and contributed to its more frequent performance. The mortality attending timely gall-bladder operations, properly performed, is, at the present time, almost negligible. "During the eleven months from November 1, 1915, to October 1, 1916, we performed 776 cholecystectomies with a mortality of 1.77 per cent."[1] "The mortality following cholecystectomy in the treatment of cholecystitis with or without stones is low, only 1.8 per cent in 2460 operations performed during the period of three years."[2] "Forty-five cholecystectomies were performed for acute cholecystitis, with no deaths, and twenty-two cholecystostomies, with one death. There were eleven deaths in 890 cholecystectomies for chronic inflammation in the gall-bladder."[3] We feel confident that additional improvement is feasible. The best time to operate for the cure of gall-bladder and bile-duct disease is before the advent of irreparable anatomical changes. At this stage, the mortality should be less than 1 per cent[6] and complete recovery the rule. Cholangitis, choledochitis and common duct stones are late and serious complications, difficult of operative relief and sometimes fatal.

In this article we discuss the following operative and post-operative complications incident to surgery of the biliary tract:

(a) Incomplete disappearance of symptoms and recurrence.

(b) Post-operative adhesions.

(c) Operative and post-operative hemorrhage.

(d) Post-operative external fistulae (operative bile-duct injuries).

(e) Post-operative biliary peritonitis.

INCOMPLETE DISAPPEARANCE OF SYMPTOMS AND RECURRENCES.

In acute or chronic cholecystitis, primary or secondary, calculous or non-calculous, early or late, isolated or associated, the paramount indications are to arrest infection, remove inflammatory products, correct existing anatomical changes, restore liver function to normal, nullify the effects of disease sequelae and prevent the return of inflammatory disturbances. The avoidance of post-operative distress in all cases is more than one can reasonably expect.

By instituting operative relief at the onset of the disease, when the inflammatory process is still limited to the gall-bladder or before it has seriously involved, damaged or crippled any contiguous organ, one is far more likely to secure a complete and permanent disappearance of symptoms. The ideal time to operate is while the condition, local and general, of the patient is good. Early operation is easy of execution and forestalls complications; delay invites disaster. Delay permits the development of dangerous local and regional complications, viz: cholangitis, perforation, pancreatitis, common duct obstruction, etc., and may induce remote disturbances (vascular, cardiac and arthritic). The chief avoidable technical causes of

incomplete cure are: Defective or improper technic; undue operative trauma; lack of thoroughness in the digital and instrumental exploration of the bile-ducts. In most instances, common-duct stones can be detected by introducing the finger into the foramen of Winslow and milking the choledochus between the fingers. No doubt, some recurrences are due to a calculus or calculi overlooked at the previous operation.

Diseases of the right hypochondriac and epigastric regions are insidious in development, are frequently unrecognized, not uncommonly misdiagnosed and often come to the operating table too late to be completely and permanently relieved. Tardiness of operative treatment is the main cause of incomplete cures and of recurring symptoms. The cases with advanced pathology are those that present a stormy postoperative course.

The increased popularity of cholecystectomy (84 per cent of patients after cholecystectomy are free from all symptoms[4]) is due to the fact that cholecystostomy often gives only incomplete and temporary relief. A successful cholecystectomy, followed by appropriate medical treatment, cures disturbances directly dependent on disease processes limited to the gall-bladder, prevents the extension of inflammation from this organ to contiguous organs and exerts a beneficent influence on local and regional inflammations due to or maintained by it: Hepatitis, pancreatitis, duodenal ulcerations, etc. A retained diseased gall-bladder is a frequent cause of ill-health and a potential source of future trouble. It is a decided factor in the recurrence of gall-stones, of infective inflammation and in the persistence of local and regional symptoms such as pain, indigestion, etc. Obstructive jaundice, either intermittent or chronic, developing after cholecystostomy is due to a stone or stones overlooked or reformed in the gall-bladder, lodging in the common bile-duct, to stricture or kinking of the choledochus, to fibrosis and traction of an adherent contracted gall-bladder, etc.

Deaver[7] states that 65 per cent of his recurrences could have been prevented by removal of the gall-bladder. Cholecystectomy often gives brilliant immediate results and eliminates the annoyance and discomfort incident to prolonged postoperative drainage. After cholecystostomy, the persisting symptoms are due to residual pathology; after cholecystectomy, they are mainly of mechanical origin and often result from operative trauma. Careful examination of the cystic, hepatic and common ducts and the systematic removal of any duct obstruction, calculous or inflammatory, secures better results. The removal of all foci of infection, proximal or distal to the hepatic system (tonsillar, dental, duodenal, appendiceal, colonic, etc.), is essential to perfect health. Appendectomy is nowadays almost a routine procedure when operating on the biliary tract.

The physiology of the biliary system is intricate and our knowledge of the functions of the gall-bladder is as yet incomplete and indefinite. Therefore, the gall-bladder should never be removed in the absence of positive indications or if it be highly probable or evident that "it can come back." Though the human body, owing to its great power of adaptation, compensates for the loss (by disease or by removal) of the gall-bladder, the needless sacrifice of this organ is a mutilation and can lead to invalidism; it may prove fatal.

In a large number of cases recovery is gradual. In others, even in the hands of the most experienced and irrespective of the type of operation performed, permanent and complete relief is not obtained. The persistence and recurrence of symptoms are due to the patient's nervous instability, the existence of long-standing and advanced pathological changes not admitting of operative correction or removal, such as hepatitis, pancreatitis, etc., adhesions, operative injuries, inadequate pre-

and postoperative treatment and metabolic disturbances. "Pancreatitis associated with or secondary to cholelithiasis has recurred after cholecystectomy and led to pancreatic cyst-formations."[9] A thorough knowledge of the technic and the respective indications and limitations of cholecystostomy and cholecystectomy will enable the operator to remove and obviate most of the frequent causes of incomplete relief, such as impaired motility, elasticity and contractility of the gall-bladder, strictures or kinks of the cystic duct, adhesions of the pylorus, transverse colon or omentum to the gall-bladder or liver, duct obstruction, etc.

POSTOPERATIVE ADHESIONS.

After gall-bladder and bile-duct operations, patients often complain of symptoms referable to adhesions existing between the gall-bladder and neighboring viscera. The operator must aim to minimize as much as possible the formation of peritoneal adhesions. In 3000 abdominal operations, symptoms manifestly due to postoperative adhesions were present in from 10 to 12 per cent of cases; in 3½ per cent of these, operative relief was necessary (Payr-[11]). It is important to differentiate between the pain, tenderness, mechanical interference and other symptoms caused by adhesions of operative and postoperative origin and the neuro-psychogenic symptoms of postoperative neuroses, between adhesions, inflammatory in nature and congenital peritoneal folds. Postoperative peritoneal adhesions, irrespective of nature or location, are due to such factors as: Infection, intraperitoneal hemorrhage, mechanical and chemical injury of the serosa, denudation of peritoneal surfaces, foreign bodies, such as gauze-drains, drainage tubes, etc.

Postoperative cholecystic and pericholecystic adhesions may follow simple as well as difficult operations. They are occasionally symptomless. Usually, they are provocative of persisting discomfort, permanent dysfunction and chronic obstructive disturbances. Patients with many pericholecystic adhesions can seldom be made entirely free from symptoms. Adhesions, by kinking or compressing the cystic or common duct, impede the flow of bile; biliary colicky pains and other distressing symptoms may result. When adhesions angulate or drag on the pylorus and duodenum, gas distress, gastric distension, spasm, vomiting and other digestive disturbances are likely to follow. Omento-cholecystic adhesions exerting traction on the greater curvature provoke painful gastric peristalsis.[10] The fixation by scar tissue of the pyloric end of the stomach or of the hepatic flexure of the colon to the liver is a not infrequent cause of gastric disturbances.

Innumerable methods and substances—liquid vaseline, sterilized olive oil, normal salt solution and non-absorbable membranes, such as rubber dam, collodion, oiled silk, etc.—have been recommended to limit, to prevent the formation of peritoneal adhesions. They have all been found wanting. In the present stage of our knowledge, surgeons are not justified in using any of these agents in the peritoneal cavity. The absolute prevention of peritoneal adhesions is as yet an unsolved problem.

Adhesions are a frequent cause of incomplete relief, of failure to cure, of recurring inflammatory and obstructive disturbances; all factors leading to adhesion formation are to be studiously eliminated. Adhesions being infectious, inflammatory and traumatic in origin, their incidence as to frequency and extent can be minimized by the practice of strict asepsis, the observance of great gentleness in all operative manipulations, the infliction of minimal damage to the tissues and the adoption of the technic most appropriate to the case at hand. We will also avoid such contributory causes as the use of chemical irritants, needless handling and exploring of organs, the undue exposure of the serosa to the air.

We will endeavor to reduce intraperitoneal hemorrhage to a minimum, to limit, as to duration and amount, gauze or tubular drainage to the bare desideratum and to cover with peritoneum all denuded surfaces. It is needless to say that the surgeon should operate with the greatest speed consistent with the patient's safety and thoroughness of execution. Chemicals, tincture of iodine, Dakin's solution, etc., cause the formation of adhesions by destroying the frail endothelium of the peritoneal surface. To inhibit the prolonged contact of denuded peritoneal surfaces, some advise the stimulation of peristalsis by purgation; others recommend that the patient's position be frequently changed.

Timely removal of gall-bladders presenting pathological changes minimizes the incidence, often prevents and suppresses cholecystic adhesions; it gives access to pericholecystic adhesions and may enable the operator to remove or forestall their sequelae. Nevertheless, the indiscriminate removal of the gall-bladder is unsurgical, dangerous and is to be condemned. Cholecystostomy, with its associated prolonged drainage and possible escape of bile into the wound, leads to the formation of adhesions. Early removal of drains, gauze or tubal, is desirable. Bile-soaked drains excite the production of dense adhesions.

The removal of shrunken, atrophied, contracted gall-bladders or of those embedded in adhesions is difficult and leaves a raw surface which should, if feasible, be covered with an omental graft or by peritoneum. As much as possible, cover with peritoneum the fissure in the liver left by the removal of the gall-bladder and all other denuded areas and thereby obviate to a very large extent the occurrence of troublesome adhesions. One or two fine catgut stitches joining the lesser omentum to the mesocolon, or fastening the great omentum into the hepatoduodenal angle, walls off dangerous raw surfaces and may insure against the attachment of adhesions to the more sensitive pylorus or duodenum. Dr. C. H. Mayo says: Avoid annoying and permanent disturbances "by forming your own adhesions," by bringing up and placing the great omentum between the liver and the contiguous denuded areas.

In cholecystostomy, the drainage-tube having been brought through the abdominal wall, preferably through a stab wound, the gall-bladder is dropped back to its normal position; thereby a source of postoperative discomfort is avoided. The anchoring of the gall-bladder to the abdominal wall is undesirable, unphysiological and not infrequently causes permanent distress. The recurring attacks of pain and tenderness and the dragging sensation in the region of the scar are often relieved by fomentations and massage.

In dealing with adhesions in the bile-duct region, the surgeon should be exceedingly circumspect in order not to injure the important structures that are present in this region. The gall-bladder may be so bound down by inflammatory adhesions as to make its removal inadvisable. It has been known to cap a perforated duodenal ulcer. A duodenal fistula[12] has been known to follow the separation of a gall-bladder adherent to the gut.

OPERATIVE AND POSTOPERATIVE HEMORRHAGE.

Operative and postoperative hemorrhage attending operations on the biliary system is an alarming complication and may prove most troublesome and difficult to control; it may end fatally.

In the absence of jaundice, hemostasis is effected by the methods ordinarily employed to arrest hemorrhage in other abdominal operations. In a non-jaundiced patient, hemorrhage, operative or postoperative, is usually easily checked if the operator be conversant with its various causes. What are these causes? Overlooked and non-ligated bleeding points, insecurely tied ligatures, premature absorp-

tion of ligature material, accidental tearing or section of normal or anomalous vessels not infrequently embedded in inflammatory tissue, and oozing resulting from the tearing of adhesions and the dissecting of the gall-bladder from its hepatic bed. It is essential that the operator secure an exposure of the operative field ample to enable him to identify the important structures present in this region. A suitable operating table, tilting or rotating, if possible, of the liver, wide retraction of the wound edges and walling off of the intestines by gauze pads, all aid in securing a clear view of and an easier access to the operative region. The incision should be adequate in length; it must permit the proper examination of the bile-ducts and the accompanying vessels. It is all-important that the operator be well versed in the topographical anatomy of the biliary region;[13] especially, should he be well acquainted with the normal and anomalous distribution of its blood vessels and the variations in the mode of union of the bile-ducts. Whenever feasible, excision should begin at the cystic end of the gall-bladder, proceeding from below upward and in the direction opposite to the lymph-current; there is less hemorrhage, the operative field is less obscured by blood and perfect hemostasis more easily secured. The cystic artery lies above and behind and not along the side of the cystic duct and presents variations in number, origin, size, length, tortuosity and anatomical relations. A single cystic artery is present in 88 per cent of individuals; in 12 per cent, there are two cystic arteries. The bile-ducts are covered by plexuses of blood and lymphatic vessels.[14] If these be cut, troublesome hemorrhage may follow. If possible, isolate and ligate the cystic artery before it divides into its two branches and let it drop back away from the surface of the liver. In clamping the cystic artery, seize only the artery and its surrounding connective tissue. Should the knot or the forceps slip from or be pulled off the cystic artery, or should this same vessel or an important branch thereof be accidentally torn or cut before being grasped, profuse bleeding will occur. The indication is immediately to catch the bleeding point without injuring the bile-ducts. Compress the bleeding point with the forefinger and catch with a few mouse-toothed forceps the tissues about the forefinger. Then lift the forceps, remove the finger and clamp the artery. After all the bleeding points have been securely ligated and the hepatic oozing fairly well controlled by peritonization, gauze-tampons, etc., the operative wound is closed. Bleeding points in the abdominal wall are located, clamped and ligated without difficulty.

Postoperative bleeding from the cystic artery is to be recognized and controlled at once; if not checked, death may result from intraperitoneal hemorrhage. When drainage has been used, blood appears on the dressings and is detected early; in the absence of drainage, it escapes into the peritoneal cavity and is only revealed by the symptoms of acute anemia. This argument is used by the opponents of cholecystectomy without drainage. Drainage provides an outlet for extravasated blood, escaped bile and inflammatory exudates.

Oozing hemorrhage is more frequent and more dangerous after cholecystectomy than after other laparotomies. The oozing comes mainly from the bed of the gall-bladder; it often is copious and very difficult to arrest. When removing the gall-bladder, incise its peritoneal coat in such a manner as to form two flaps of serosa. Use these to peritonize the denuded gall-bladder bed; if necessary, fix an omental graft to the raw liver surface. The cellular tissue between the gall-bladder and the liver is at times very vascular. In removing the gall-bladder from its bed, minimize hemorrhage by sharp dissection of this tissue and the least amount of trauma to the liver. The oozing of blood may be checked by the pressure of pads soaked in hot salt solution. If the denuded area be extensive

and the oozing difficult to control, a gauze-pad is spread over the denuded hepatic area and extends from the stump of the cystic duct well beyond the liver. This is done to stop oozing and serve as a drain. In many cases a cigarette drain suffices. After cholecystostomy and cholecystectomy, the gauze packing is to be cautiously removed lest oozing recur from the gall-bladder bed and other denuded areas.

In the presence of severe obstructive jaundice, owing to the fact that the coagulation time of the blood is increased from three or four minutes to ten or twelve minutes or even longer, operations on the biliary tract are extra hazardous. Icteric patients, owing to their low general resistance and great liability to serious and, at times, fatal hemorrhage, should not be subjected to operations that are not immediately and absolutely necessary. The cholemic patient's great liability to hemorrhage must be foreseen; it necessitates appropriate and adequate pre- and post-operative care. Though cholecystectomy is incontestably the better operation as to the rapidity and completeness of cure, nevertheless, in cases of deep jaundice, it is better to do the minimal amount of operating and therefore to perform the lesser operation. Excision of the gall-bladder, if associated with much injury to the liver, may be followed by serious oozing from the denuded liver surface. Cholecystostomy permits the slow decompressing of the liver by drainage through the gall-bladder; later, after the jaundice has subsided, the hepatic function has improved and the patient's resistance increased, the other therapeutic indications may be met.[17] When in jaundiced patients indicated operations can be safely postponed, they should be adjourned. "If the jaundice is just beginning to show at the time the patient presents himself for treatment, it may be best to operate without delay, but if he comes when the jaundice is decreasing, it is best to wait until it has disappeared or is at a standstill."[15] Operation should not be too-long delayed, as prolonged obstructive jaundice is a factor in the causation of biliary cirrhosis.

Before operating on cholemic patients, the coagulation time of the blood and its urea content are to be brought approximately to normal. It is also desirable that there be a normal total urinary output and an absence of albumin and casts. The existing hepato-renal insufficiency must be treated. Very frequently, one must operate in the absence of ideal conditions.

Horse serum, defibrinated blood, etc., administered subcutaneously, decrease the clotting time of the blood. All our jaundiced patients receive calcium lactate per mouth for several days before and after the operation. According to Lea and Vincent, the clotting time of blood is lowered by doses of calcium lactate taken by mouth each day for three days. In all cases of obstructive jaundice, our patients receive for three days preceding the operation a daily intravenous injection of 5 to 10 cc. of a 10 per cent solution of calcium chloride in redistilled water. Walters says that 5 cc. of a 10 per cent solution of calcium chloride in redistilled water, if given intravenously for three days immediately prior to operation, brings the clotting time within normal limits despite a most intense jaundice. Blood transfusions (whole blood is preferable)[16], before and after operation, are useful in emaciated, depressed, jaundiced patients, often enabling them successfully to undergo the ordeal of a serious surgical operation. Blood transfusions, though valuable, do not have in obstructive jaundice the specific effect that they have in hemorrhage of the new-born. By applying, both before and after operation, dry and moist heat to the hepatic region, the activity of the hepatic cells is increased. The general condition of jaundiced patients can be much improved by the ingestion of large amounts of water per mouth, of normal salt solution subcutaneously and of glucose and sodium bicarbonate solutions rec-

tally. The patient's carbohydrate balance should also be reinforced.

POSTOPERATIVE EXTERNAL FISTULAE.

All, intermittent or chronic, postoperative external fistulae of the biliary tract should be treated operatively if they be attended with discomfort and health impairment and do not show any tendency to spontaneous closure. According to nature of discharge, they are classified into mucous and biliary; according to site of origin or internal orifice, into gall-bladder, cystic, hepatic and common duct fistulae. Persisting sinuses due to careless technic, lost sponge, forgotten drain, etc., must be distinguished from fistulae.

EXTERNAL MUCOUS FISTULAE.

Cholecystotomy intentionally creates a biliary fistula. In the absence of obstruction or stenosis of either the cystic or common bile-duct, such operatively-created fistulae heal spontaneously after a shorter or longer period. If the cystic duct be completely obstructed, the fistula becomes mucous in type and closes and opens intermittently until the cause has been operatively removed. Spontaneous permanent closure rarely occurs in mucous fistulae resulting from:

(a) Impaction of a calculus at the junction of the gall-bladder and cystic duct;

(b) Stenosis of the cystic duct following calculous or other traumatic ulceration;

(c) Compression of this same duct by cicatricial tissue, traumatic or inflammatory in origin.

The requisites for spontaneous healing are obliteration of the cavity of the gall-bladder and conversion of the organ into a fibrous cord or mass.

The removal of the entire gall-bladder is, in the absence of any common duct obstruction, the best treatment for a mucous fistula. The cause, origin and source of the fistula and the fistula itself are suppressed by cholecystectomy. In acute and chronic cholecystitis, when stenosis of the cystic duct due to traumatic ulceration is present, the ablation of the gall-bladder prevents the development of mucous fistulae. If the cystic duct and the gall-bladder show but slight alteration, it may suffice to remove the impacted stone. As a rule, this calculus is not of new formation; it was present and overlooked at the time of the first operation. If the common duct be the seat of irremovable obstruction (partial or complete), the cystic duct and the gall-bladder are cleared of their contents and a cholecyst-enterostomy is performed. Of the three procedures just mentioned, ablation of the organ is the operation of election for the cure of mucous fistulae of the gall-bladder. Entero-cholecystic anastomosis is difficult of execution; it is a measure of last resort.

EXTERNAL BILIARY FISTULAE.

A safe and successful cholecystectomy necessitates an adequate exposure of the operative field and a careful exploration of the bile-ducts. If, at the time of the excision of the gall-bladder, calculi present in the common duct are overlooked, a biliary fistula not uncommonly results. Biliary fistulae due to calculous occlusion of the common bile-duct, if the duct be otherwise normal or almost normal, close upon removal of the occluding calculus or calculi. Biliary fistulae due to compression of the common duct by cicatricial tissue are cured by the removal of the compressing agent. An operator, unskilled and inexperienced in biliary surgery and possessing only a superficial knowledge of the many anatomical variations in the mode of union, length and course of the bile-ducts, is very liable to ligate, crush, cut or resect the hepatic or common duct. An incision ample in length permits identification and palpation of the ducts and minimizes their liability to injury. The cystic duct must be seen when ligated. The operator must see that he is tying it and nothing else. The vast majority of duct injuries are due to errors in technic or forgetfulness of the anomalies of this region. Bile-duct injuries are of more frequent occurrence if the

topography of the biliary region is altered and distorted by adhesions.

In removing the gall-bladder, ligate and divide the cystic duct close to the choledochus and be careful not to traumatize the latter. In difficult cases, it is better to leave a stump of the cystic duct than to run the risk of injuring the common duct. Dilatation of the stump of the cystic duct is uncommon and usually of negligible clinical significance. Some biliary fistulae have followed too low ligation of the cystic duct. Incisions giving inadequate exposure of the operative field are responsible, in part, for injuries to the bile-ducts. "Working in the dark" begets poorer results and a higher percentage of complications. Under the most favorable conditions, the operative field is a limited one and important structures lie in such close proximity that accidents are not uncommon. Duct injuries are less common since retrograde cholecystectomy has come into more general use.

All bile-duct injuries should be repaired immediately, that is, at the time of infliction; if overlooked or improperly repaired, a biliary fistula or a biliary peritonitis follows. Spontaneous cure of serious bile-duct injuries is so infrequent that its occurrence, for practical purposes, can be disregarded.

The indications for operation are determined by the patient's general condition, the age of the fistula, the amount of discharge and the probability or non-probability of spontaneous permanent closure. The normal flow of bile into the intestines must be reestablished; there must be a permanent passageway for the bile from liver to intestines. Permanent biliary fistulae that discharge profusely entail loss of appetite, emaciation and, in time, death. Reconstructive bile-duct operations are failures when the line of suture yields or when a secondary stenosis or an ascending angiocholitis develops. In irreparable common duct injuries, the anastomosis of the gall-bladder to the stomach, duodenum, jejunum or colon is indicated. This indication cannot be met if the gall-bladder has previously been removed or if it be the seat of degenerative changes unfitting it for anastomosis. The anastomosis to the colon is a measure of necessity, performed only if the patient's condition be precarious or when the anatomical conditions present do not permit prolonged operative maneuvers. The saving of the bile to the organism improves digestion and avoids malnutrition. The physico-chemical functions of the bile are of value in intestinal digestion.

Slight parietal injuries of the hepatic or common duct are to be sutured. Complete or almost complete division of either of these conduits may be repaired by circular anastomosis of the divided ends with or without mechanical aids, such as a rubber tube, glass tube, etc., allowed to emerge through a separate opening in the duodenum. The line of union is to be reinforced with omentum. In complete bile-duct division, it is difficult to find the proximal and, especially, the distal end, and it is still more difficult successfully to suture the ends to one another. Reconstruction of the bile passages is always a formidable procedure, even to the most expert technicians. The extent, location and nature of the duct injury, the associated pathology (dense, firm adhesions not easily separated, etc.) and the patient's general condition must all be considered so as to choose the operative technic most appropriate for the case at hand. When, owing to the length of the damaged area, the two ends of the duct cannot be apposed, the defect is to be bridged by inserting one end of the rubber tube in the upper segment and then passing the other end through the lower segment into the duodenum; omentum or other tissue is sewed over the exposed portion of tube and reconstructed duct[19]. New canals built by the aid of inverted veins, fascial, omental or other tissue do not give lasting satisfactory results. These newly created ducts, not being mucous-lined and not being provided with a submucosa, invariably contract. If the distal end of the divided

duct cannot be found or if it be unfit (too short, too friable, etc.) for end-to-end suturing, hepatico-duodenostomy[18], the implanation of the proximal end of the hepatic duct into the duodenum and hepatico-gastrostomy, implanation of the proximal end of the hepatic duct into the stomach, are practised. Both of these operations can be done upon a rubber tube and direct suture.

POSTOPERATIVE BILIARY PERITONITIS.

Circumscribed or diffuse postoperative biliary peritonitis is due, partly or wholly, to the escape of bile into the peritoneal cavity. When generalized, it is a serious complication. It follows the soiling during the operation of the operative field with gall-bladder and bile-duct contents or the leakage after the operation of bile into the peritoneal cavity. The site of leakage may be an oozing liver surface (gall-bladder bed), damaged or cut normal or anomalous bile-ducts, an improperly or insecurely ligated cystic duct whose ligatures have slipped or been absorbed prematurely. If the cystic duct be divided and ligated too close to the choledochus, the bile pressure may force off the ligatures; bile then escapes into the peritoneal cavity and biliary peritonitis results.

The prophylactic treatment of biliary peritonitis consists in the careful avoidance and successful removal of its etiological factors. By the aid of abdominal pads, the operative field is carefully walled off from the general peritoneal cavity, thus minimizing, at times, preventing the contamination of the latter by the escape of infected or non-infected bile. Before closing the operative wound, see that the cystic duct is securely tied by two ligatures and that all bile-duct injuries are repaired. Fatalities due to overlooked duct injuries are not uncommon.

General peritonitis is always a possibility when drainage is omitted. For several days after cholecystectomy, oozing of serum, blood or bile occurs from the gall-bladder bed. Drainage prevents the accumulation of effusion in the peritoneal cavity and provides for the escape of exudates. In practically all difficult operations on the biliary tract, I drain the subhepatic space and the renal well. After empyema, rupture of the gall-bladder and in cases in which hemostasis is not perfect, drainage for a few days is imperative. Healing is neither unfavorably influenced by drainage nor are undesirable sequelae to be feared. Leakage is more frequent when the gall-bladder is removed from above downwards[20]. Walker states, "this is a further argument for careful isolation and ligature of the cystic duct and the removal of the gall-bladder from below." In many cases, it suffices to place a soft rubber tube or cigarette drain along the gall-bladder bed and to make it project through a stab wound in the loin or through a stab incision an inch or two to the right of the operative wound which is then closed. Experience has taught us that a stiff tube may cause much distress and a soft rubber one, actual danger through kinking and blockage.

The prophylaxis of biliary peritonitis is all important. This is due to the fact that the treatment of this affection, like that of other forms of acute peritonitis, is very unsatisfactory. The indications are to evacuate all bile collections, to check the further escape of bile into the peritoneal cavity and to accelerate the elimination of bile-salts from the circulation. To arrest the escape of bile, it is necessary to expose and repair the injured bile-duct and to drain the biliary region. Hypodermoclysis and proctoclysis are employed to combat the existing toxemia. These patients are very sick and unable to withstand any lengthy and complicated operative maneuvers. Symptoms are met as they arise by the usual measures.

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INTESTINAL COMPLICATIONS OF PULMONARY TUBERCULOSIS.*

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Pulmonary tuberculosis and its many complications has held the attention of medical men throughout the ages. No other disease has so stimulated succeeding generations of clinicians and laboratory workers and yet maintained a like record as the greatest scourge of all ages and nations. Yet when one surveys the results of the work that has been done on this subject he can but acknowledge that we have not gone very far from the words of Hippocrates when he directed his patients to remain much out of doors, drink freely of milk, avoid intoxicants, venereal and other excesses, and advised a change of climate.(1)

Notwithstanding the enormous amount of work that has been done on the complications of pulmonary tuberculosis we find considerable variation in the percentages given as a result of autopsy findings from various parts of the world. In fact they vary between such wide limits as five percent and ninety-eight percent.

The wide variation quoted for the intestinal complications of this disease, has been the source of inspiration for the data which will be shown in this paper. It is desired to report the results of a large number of autopsies which were done in Charity Hospital, New Orleans, Louisiana, covering a period of nine years (1916-1924), in order that the figures gathered from this material may be compared with the results of autopsies from other sections and countries. During the period from 1916 to 1924 inclusive there was a total of two thousand six hundred and ninety-six autopsies carried out on all diseases, of which a total of two hundred and sixty-four cases died of pulmonary tuberculosis and its complications.

The autopsies included in these tables were carried out under the direction of Dr. C. M. Duval, Professor of Pathology and Bacteriology Tulane University, and formerly Director of the Pathological Laboratories Charity Hospital, and show the results of both microscopical and macroscopical diagnosis in every sense.

Since it is the intention to show only intestinal lesions which occurred second-

*Read before the Staff of the Southern Baptist Hospital, New Orleans, April 12, 1927.

arily to pulmonary tuberculosis, no autopsies on patients under ten years of age have been included in these tables, thus accepting the prevalent view that primary tuberculosis of the intestines does not occur in the adult.

In table A the entire two hundred and sixty-four cases of pulmonary tuberculosis are shown with the idea of presenting the percentage of occurrence of tuberculosis of the intestines, peritoneum and mesenteric lymph nodes according to individual lesions, age, sex and race, as secondary lesions. On studying this table it is seen that of the ninety-two autopsies of white patients sixty-one or sixty-six percent were between the ages of thirty and sixty years, while of the one hundred and seventy-two autopsies of colored patients ninety or fifty-two percent died during the same period.

From table B it is seen that white males showed intestinal complications least often, while colored males, white females and colored females followed in order of frequency. Also this table shows that of the ninety-two white patients only twenty cases or twenty-one percent showed intestinal complications, while of the one hundred seventy-two colored patients there were sixty-three patients, or thirty-six percent which showed intestinal complications.

Sir William Osler[2] stated that fifty-five percent of all patients afflicted with pulmonary tuberculosis show secondary involvement of the bowels. Table B shows that of the entire two hundred sixty-four cases there were eighty-three showing secondary involvement of the bowels, which gives us a considerably lower figure, amounting to thirty-one per cent.

In these tables the term enteritis includes all lesions of the lining or muscular wall of the intestines found anywhere between the pylorus of the stomach and the anus.

Of the eighty-three cases showing complications a total of twenty-six of them were part of a generalized miliary tubercular process.

Comparing the figures from various writers in table C with those obtained from this series of cases, fifteen percent is appreciably lower than the majority of figures from other localities, while the figures on secondary tuberculous peritonitis from Charity Hospital are about an average of the figures shown in other localities in table D.

So far as I have been able to ascertain from a search of the Cumulative Index and Index Medicus no previous attempt has been made to show the occurrence of intestinal complications of pulmonary tuberculosis according to individual lesions, age according to death by decades, sex and race, although Boles[6] stated that tuberculous peritonitis occurred most often between the ages of twenty and forty years. In table A we see that of the entire twenty-two cases showing tubercular lesions of the peritoneum fourteen cases or sixty-three percent were between the ages of twenty and forty years, hence confirming Boles' statement.

Study of tables A and B show that the incidence of pulmonary tuberculosis with reference to age and race confirms the general teaching that the white race has acquired a comparatively greater immunity to this disease than the colored race. Also that the susceptibility of the negro extends over a greater period of life than that of the white race. We see that the males of both races are less likely to show intestinal complications than the females of the same race. It is believed that this is explainable on the basis of the belief that the male has a stronger constitution which is acquired during youth and young manhood as a result of vigorous games or exposure to fresh air and sunshine while occupied at outdoor labor.

It seems that when it can be readily demonstrated that the intestines are secondarily involved in one out of every three cases of pulmonary tuberculosis handled by the medical profession we ought to devote more time and attention to this

phase of treatment of the various symptoms that arise during the course of the disease.

CONCLUSIONS.

1. Patients suffering from pulmonary tuberculosis in the United States are probably not as susceptible to tuberculous involvement of the intestines as patients residing in England, France or Germany.

2. Susceptibility to secondary involvement of the intestines in pulmonary tuberculosis beginning with white males increases with colored males, white females, and colored females.

3. The white race is considerably less susceptible to secondary intestinal lesions than the colored race.

4. Adequate significance is not paid the intestinal pathology present with great frequency in the treatment of pulmonary tuberculosis.

TABLE A.

Age at death shown in decades	Total cases pulmonary tuberculosis	Abdominal complications secondary to pulmonary tuberculosis in cases shown in preceding column. Enteritis	Peritonitis	Enteritis and peritonitis combined	Tuberc. lesions of mes. L. nodes	Percentage complications according to decades
White males—						
10-19 years	3	0	0	0	1	33
20-29 "	9	2	0	0	0	22
30-39 "	12	3	0	0	0	25
40-49 "	17	3	0	0	0	17
50-59 "	15	1	0	0	0	6
60-69 "	8	0	0	0	0	0
70-79 "	5	0	0	0	0	0
Totals	69	9	0	0	1	
Percentage complications by lesions		13	0	0	1.4	14
White females—						
10-19 years	1	0	0	0	1	100
20-29 "	3	2	0	0	0	67
30-39 "	11	1	2	1	0	36
40-49 "	3	3	0	0	0	100
50-59 "	3	0	0	0	0	00
60-69 "	1	0	0	0	0	00
70-79 "	1	0	0	0	0	00
Totals	23	6	2	1	1	
Percentage complications by lesions		26	8.6	4.3	4.3	43

Abdominal complications secondary to pulmonary tuberculosis in cases shown in preceding column.

Age at death shown in decades	Total cases of pulmonary tuberculosis	Enteritis	Peritonitis	Enteritis and peritonitis combined	Tuber. lesions of mes. L. nodes	Percentage complications according to decades
Colored males—						
10-19 years	6	1	2	1	0	50
20-29 "	39	9	4	2	2	39
30-39 "	27	2	3	2	2	25
40-49 "	18	5	0	0	2	38
50-59 "	21	1	3	0	0	19
60-69 "	10	0	0	0	0	00
70-79 "	3	0	0	0	1	33
80-89 "	1	0	0	0	0	00
90-99 "	1	0	0	0	0	00
Totals	126	18	12	5	7	
Percentage complications by lesions		14.2	9.5	3.9	5.5	33
Colored females—						
10-19 years	8	1	3	2	0	75
20-29 "	11	2	1	0	0	27
30-39 "	11	2	2	1	0	45
40-49 "	9	2	2	2	0	66
50-59 "	4	1	0	0	0	25
60-69 "	2	0	0	0	0	00
70-79 "	0	0	0	0	0	00
80-89 "	1	0	0	0	0	00
Totals	46	8	8	5	0	
Percentage complications by lesions		17.3	17.3	10.8	0	45

TABLE B.

Abdominal complications secondary to pulmonary tuberculosis in cases shown in preceding column.

Age at death shown in decades	Total cases of pulmonary tuberculosis	Enteritis	Peritonitis	Enteritis and peritonitis combined	Tuberc. lesions of mes. L. nodes	Percentage complications according to sex
White males	69	9	0	0	1	14
Colored males	126	18	12	5	7	33
White females	23	6	2	1	1	43
Colored females	46	8	8	5	0	45
Totals	264	41	22	11	9	31
Percentages complications by lesions		15	8	4	3	31

TABLE C.

Complications of pulmonary tuberculosis by secondary tuberculous enteritis as quoted by various writers are given in this table:

Fenwick and Dodwell (3)	4.4%
Eichhorse (3)	21.9%
Osler (2)	23.0%
Henry Phipps Institute (4)	34.0%
Heinze (3)	51.0%
Honing (3)	70.%
Weigert and Orth (3)	90.0%
Herxheimer (3)	98.0%
Charity Hospital, New Orleans, La.	15.0%

TABLE D.

Complications of pulmonary tuberculosis by secondary peritonitis as quoted by various writers are given here:

P. Horton-Smith Hartley (5)	3.4%
Munstermann (5)	5.0%
Henry Phipps Institute (4)	14.0%
Borschke (5)	16.17%
Charity Hospital, New Orleans, La.	8.0%

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NOTES ON THE USE OF LIPIODOL IN THE BRONCHI.*

PHILIP H. JONES, JR., M. D.,
AND
CHAILLE JAMISON, M. D.
NEW ORLEANS.

Lipiodol is a preparation of the oil of poppy, containing 40% by weight, of iodine. The viscosity of this vegetable oil is such that it is freely fluid when warm, and also of sufficient specific gravity to make it penetrate to the dependent bronchi; the iodine content makes the preparation opaque to the ray, and also antiseptic.

The use of this preparation is due to the French clinicians and has been in use in that country for four or five years, from where it spread into general use throughout the continent, and England. It has attracted attention in this country during the past year or so. Its first use in radiology was by Sicard, who introduced it into the spinal cord for the localization of tumors; Forestier later suggested that it might be used for the diagnosis of broncho-pulmonary affections. There is nothing particularly new in the introduction of opaque substances into the bronchi, as Chevalier Jackson in 1905 insufflated bismuth subcarbonate into parts of the bronchial tree through the bronchoscope, for purposes of diagnosis and treatment.

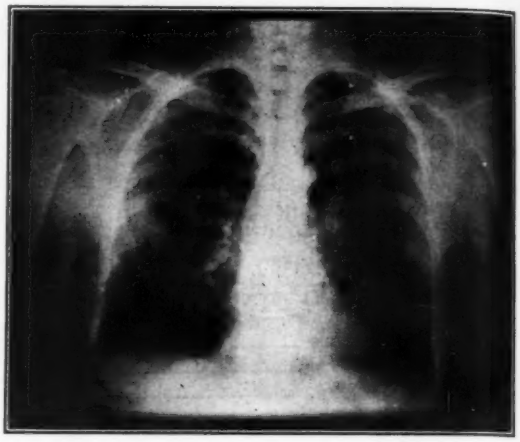

Fig. 1—View of chest before introduction of lipiodol

We are told by Dr. Matas that the use of oils, notably oil of sesame, for therapeutic purposes by introduction into the trachea and bronchi, was practiced many years ago and that a paper on this subject was presented before this Society by Dr. McShane at the time.

There are three techniques which may be used. After thorough anesthetization of the pharynx and larynx by the use of cocaine, the supra-glottic method by indirect laryngoscopy and the use of a laryngeal cannula is not difficult and very satisfactory. The trans-laryngeal method may be practiced either with indirect laryngoscopy and a cannula or rubber tube passed

*Read before the Orleans Parish Medical Society, October 25th, 1926.

through the larynx into the trachea, or a catheter may be passed by the sense of touch and without the use of laryngoscopy through the trachea and even into the primary bronchi. The oil is injected with a high pressure syringe in any instance. Another method, which is particularly applicable in children, is to introduce a needle from the outside of the neck through the crico-thyroid membrane directly into the larynx. This is, of course, done under local anesthesia. In any of the above methods the cough reflex may be diminished and the procedure greatly facilitated by hypodermic of morphine about half an hour beforehand. Also the cough reflex may be greatly reduced by the injection of 1% novocain into the trachea before the introduction of the oil.

When the substance is introduced into the bronchi, if the patient is in the erect position the oil tends to flow into the right bronchus and then into the bronchi of the lower lobe of the right lung. This may be overcome by having the patient in such a posture as to encourage the oil to flow into the desired locality. Introduction into the apices of the lungs is naturally extremely difficult and almost impossible. The technique used for the introduction of lipiodol in the cases which we are about to present was that of indirect laryngoscopy by the supra-glottic route; we may add that for the production of good pictures at least 30 c.c. of the oil should be introduced.

It seems reasonable to believe that any substance containing 40% of iodine, which is slowly liberated over a long period of time, when introduced into the bronchi should exert a distinct antiseptic influence and it is claimed that it is of very marked value in cases of abscess of the lung, bronchiectasis and chronic bronchitis. We are not, at the present time, in a position to make any definite statement in this regard, though we have had very few patients who did not say that they felt better after the injection. Of ill-effects it is said

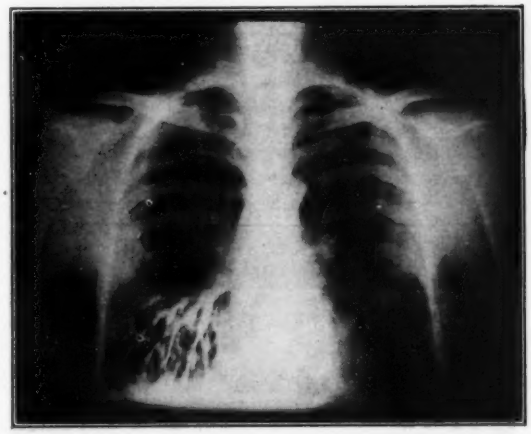

Fig. 2—Same as Fig. 1 after introduction of lipiodol, showing bronchiectasis.

that acute iodism may be produced in those sensitive to this drug, and one is also reminded that iodine is contraindicated in pulmonary tuberculosis, though in this latter regard we must remember that at one time the use of iodine was highly recommended in the treatment of pulmonary tuberculosis and that a very recent monograph on this subject lauds its value. It has been said that the oil may become inspissated in the bronchi, particularly where the lung has been collapsed after its use. Usually, however, it is coughed up within a few days.

We wish to thank Dr. Suzanne Schaeffer for interest and collaboration.

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Fig 3—Same. Lateral view.

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DISCUSSION.

Dr. Val. H. Fuchs: In my fairly limited experience with injections I have tried each one of the methods of getting lipiodol into the bronchi and lungs. I tried the supraglottic and the transglottic; I used the bronchoscope, putting it directly into the lung, and of the various methods tested I believe the bronchoscope to be the best because, in using it, regardless of the patient's position, it can be passed into either lung. Another method, brought out by Dr. Sam Iglauer of Cincinnati, is that of introducing lipiodol thru intubation tubing: in its employment, however, wishing to reach the right or the left lung, there is also the disadvantage of having to place your patient in a certain position. The bronchoscope, due to the ease with which it is passed at will into either lung, is certainly superior to the above mentioned methods.

I know of a case, first treated in the country, in which a diagnosis of pulmonary tuberculosis was made. The patient was later sent to Asheville, the diagnosis at that time resting between lung abscess and bronchiectasis. When sent to New Orleans for treatment the condition had existed for eight years. We used, first the bronchoscope, encountering offensive pus which we thought probably emanated from a lung abscess. Suction was applied and about a pint of purulent material aspirated. Lipiodol was then injected by bronchoscope and a bronchiectasis condition demonstrated.

I would like to ask Dr. Jones if there is any contraindication to the use of lipiodol?

Dr. I. I. Lemann: I am sorry Dr. Henderson is not here tonight, as together we have been using lipiodol at Touro for about a year with very satisfactory results. We have had a series of cases of lung abscess in which the lipiodol injection has given us considerable information.

I have a case there now, a boy who, following tonsillectomy a year ago developed a lung abscess. The abscess was drained from the outside but unfortunately there was a rupture into the pleura and he had empyema as well. He survived that and now returns within the last month for further study. A few days ago Dr. Weil passed the bronchoscope and injected lipiodol, demonstrating an abscess still present. Although clinically well, the boy still has a lung abscess cavity on the right side and many bronchiectatic cavities on the left side. This case illustrates one of the interesting advantages to be derived thru these studies, viz: the deduction that it will not be of great advantage to tackle this boy again from the outside, as he has bronchiectatic cavities on the other side. We are hoping that Dr. Weil will be able to help him through the bronchoscope. Certainly the experience that Dr. Chevalier Jackson has in successfully treating his patients through the bronchoscope ought to stimulate us to study still further the best method of attack.

We had, in the last year, the opportunity of studying another very interesting case with lipiodol—a man admitted with a probable diagnosis of gall-bladder pathology, in whom we made out a very much enlarged liver, the enlargement extending upward, and finally located an hepatic abscess. There was, however, no preceding history of dysentery, nor were we able with the proctoscope to demonstrate amoebae definitely. He presently developed a hepato-bronchial fistula and we have since studied his case with liopodol injected from the outside through the fistula.

The study has been of great help in determining what to do.

Dr. A. I. Weil: My chief interest in lipiodol injections is in the manner of introduction. I have never tried the needle into the larynx, but have introduced lipiodol into the lungs very satisfactorily by the cannula into the larynx and have also used the bronchoscope for this purpose.

Dr. Iglauer of Cincinnati showed me the intubation method, but for the purpose it does not seem as desirable as the bronchoscope. Certainly the latter instrument is as easily introduced as this tube and can be immediately placed where you want it without having to change the patient's position which, in the intubation method, is necessary.

I am glad to hear that the amount of lipiodol injected, or a repetition of its use, does not cause subsequent distress to the patient, as I have recently had a case in which the radiograph was unsatisfactory, probably because I did not use a sufficient amount. I used only 10 c.c. and on the next occasion I shall try more.

In another case of lung abscess, which I treated with Dr. Lemann, also following tonsillectomy (and I want to say that I was not responsible for the lung abscess in either instance), we introduced the lipiodol by means of the tracheal cannula and got a good outline of the bronchial tree.

While on that subject I might say that not only is the bronchoscope best as a means of injecting lipiodol, but it has the virtue of disclosing pathology which it is able to take care of at the same time. At Mt. Sinai Hospital, New York, the bronchoscope is used in routine examinations of all obscure lung cases. During these examinations foreign bodies have been discovered and removed and the condition has cleared up when there was no associated pathology.

Besides being one of the best methods of injecting lipiodol, the many lung conditions discovered through bronchoscopy are an additional argument in favor of its adoption.

Dr. H. W. E. Walther (question): How long does the liopodol remain in the lungs after it is injected? Does it ever produce any abscesses in the lungs or have any serious after results?

Dr. H. L. Kearney: It seems to me that there ought to be a very close co-operation between the internist and the thoracic surgeon, and the bronchoscopist in the use of lipiodol in the bronchi. With the bronchoscope you have not only the advantage in placing the lipiodol where you want it, but you have the very great advantage of a diagnostic bronchoscopy at the same time. Bronchoscopy for the injection of lipiodol is a thing which should be done with local anesthesia in adults and no anesthesia in children.

Dr. Chaille Jamison (closing): I thank you very much for the discussion, through which I have learned a great deal. I wish to say to the Ear, Nose and Throat men that the reason we undertook this study is because we wanted to do it in our ward at Charity Hospital, and it is so difficult to get the Throat men to spend much of their valuable time to do this work, that one of us, however incompetent, had to work up the technique.

The injection of lipiodol by the supraglottic method is extremely simple and efficacious. It gives an outline of the bronchial tree; the site of the pathology in either lung is accurately determined; and the nature of the affection (lung abscess, bronchiectasis, etc.) revealed. I cannot see that the use of the bronchoscope is indicated —passing first into one lung, then in the other; in one bronchus, then repeating the process; it is too elaborate a procedure. This method takes fifteen to twenty minutes, and the patient is sent to the x-ray for roentgenographic study. There is no use to complicate a simple thing. It is good for mapping out small portions of the lung, but for a general survey I cannot see its indications. Our method, visualizing the entire field, is certainly preferable. But this, perhaps, is merely a personal view. I understand that in children the use of a modified intubation is absolutely necessary.

Now regarding the amount. We put as much as 40 c.c. in the chest without evidence of distress. We have at three intervals given 40 c.c. to the same patient, again without ill effects. Small amounts do not give good pictures.

In answer to Dr. Walther's questions.

1. Regarding the immediate symptoms that might result? That is going to depend on how good your anesthesia is. If the larynx and trachea are well anesthetized and your patient is not nervous, you are going to have no disturbance. At first, with patients in my clumsy hands it was impossible to get any in at all. I failed on two occasions; one patient in whom I finally succeeded in injecting 10 c.c., coughed it up before reaching the X-ray Department.

2. Alarming symptoms? As for alarming symptoms, thus far we have had none at all.

3. Time of expulsion? This varies—right away, from the minute you get it in up to two or three years.

4. The effect on tuberculosis? The effect on tuberculosis is more or less uncertain.

5. About the use of lipiodol in a tubercular lung? Dr. Durel put his finger on the difficulty. I really do not see the advantage of getting lipiodol into the apices in these cases. We do not need lipiodol for diagnosis, obtaining the desired information through physical examination and ordinary roentgenogram. Still in its experimental stage, the time has not yet arrived when we can assert that its use is contra-indicated in a certain condition, or advocate its employment in all cases. With regard to its therapeutic side, I must confess that thus far I have seen nothing in the way of a result that would lead me to believe in its curative value. Theoretically, it should be of the greatest help in cases of chronic bronchitis.

It has for its recommendation: simplicity of technic, absence of distressing after results, diagnostic value and a possible therapeutic value.

NOTICE TO MISSISSIPPIANS

As the Journal goes to press, a telegram just received from Dr. T. M. Dye, Secretary of the Mississippi State Medical Association states that the meeting place for

The Convention

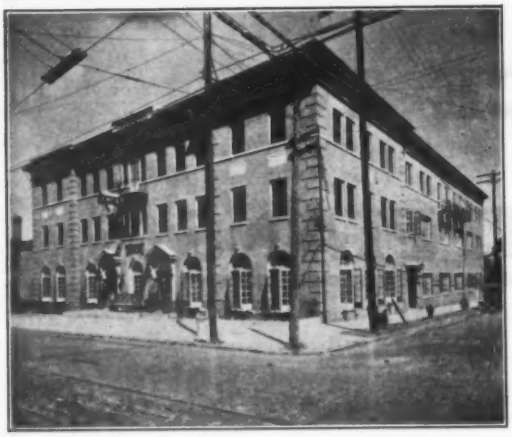
has been transferred from Vicksburg to

Jackson

during same dates as previously announced

May 10-12, 1927

DRIVE TO VICKSBURG



Junius Ward Johnson Y. M. C. A. Building, where General Sessions, Scientific and Commercial Exhibits will be held.

There are many highways of great scenic beauty leading into Vicksburg and doubtless many members of Mississippi State Medical Association and the Woman's Auxiliary will want to drive to Vicksburg for the meeting with the Issaquena-Sharkey-Warren County Medical Society on May 10th, 11th and 12th. With this thought in mind the Committee at Vicksburg has arranged to furnish detailed road information at that time to those contemplating the overland trip. A moment's thought will show the reason for this.

Warren County, like many other sections of the country, has been experiencing unusual water conditions which often make a statement of road conditions one day of little or no value several days later; for these reasons all who contemplate making the trip to Vicksburg by automobile are urged to write to Dr. Leon S. Lippincott, Secretary. On receipt of each letter detailed information will be sent direct.

This plan will insure each driver receiving correct information of the route over which he proposes to travel.

Radiating from Vicksburg, like the fingers of an outstretched hand, are paved highways leading to some of the most picturesque localities in the State. A trip through the famous Vicksburg National Military Park is always worth while, and when made in a hired automobile only makes the visitor more eager to drive for himself so that he may linger as fancy dictates.

All of Vicksburg—the older sections still surrounded with their ante-bellum atmosphere, the newer sections reflecting progress and prosperity, the old and new river fronts, the industrial activities—all have charm and interest for the visitor. The enthralling beauty of a sunset filled from the top of Fort Hill is well worth the having your own car with you.

THE CONVENTION CITY.

Vicksburg, Mississippi, built along the slopes and crests of the "miniature mountains" of West Mississippi, overlooks the Mississippi and Yazoo rivers, which form its western boundaries and meet near the southwestern limits of the city. The Vicksburg National Military Park forms its northern, eastern and southern boundaries.

Its population is 25,000.

A modern city today, it is an old community, with a story varied, thrilling and romantic.

Established in 1791 by the Spaniards as Fort Nogales, it became United States territory before the close of the Eighteenth Century and was chartered as a city in 1825.

From the viewpoint of transportation facilities, no city is better situated.

On two rivers, it is also served by important trunk line railways. At the head of deep water navigation in the Mississippi Valley, it has a large, safe, land-locked harbor.

It is terminal point for the Mississippi-Warrior Service, which operates a $400,000 Vicksburg terminal for the transfer of freight to and from rail and river carriers; is served by privately owned Mississippi River steamers, which operate between Vicksburg and New Orleans; and has hourly ferry service to and from Louisiana shore.

Under a recent act of Congress, authorizing the bridging of the Mississippi River at Vicksburg, plans are being developed for the construction of an $8,000,000 bridge to connect Vicksburg with the rich Louisiana territory west of it.

In order to put Vicksburg into closer touch with the Delta, a $420,000 bridge across the Yazoo River is being built.

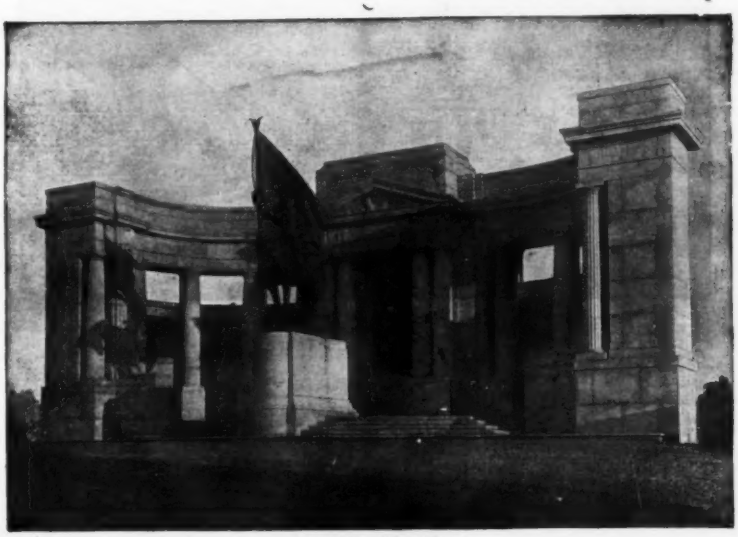
Eight highways, including the Mississippi River Scenic and the Dixie Overland, radiate from Vicksburg as a center and connect it not only with local Mississippi, Louisiana and Arkansas territory but with distant points.

The excellence of its transportation facilities and the fine territory tributary to it have enabled Vicksburg to become the most important wholesale center in Mississippi.

Situated at the junction of the hill and valley sections of West Mississippi, immediately south of the famous Yazoo-Mississippi Delta, and in easy touch with the alluvial sections of North Louisiana and Southeastern Arkansas, Vicksburg's trade territory is rich and prosperous. Its principal crops are cotton, corn, peas, beans, sweet and Irish potatoes, and hay. It is unsurpassed as a grazing country. Pecans and walnuts are indigenous to the soil and figs and peaches and other fruits thrive.

Northwest of Vicksburg, there is, at present, being carried on one of the greatest reclamation projects in the United States. That project, known as the Brunswick Levee, will complete Mississippi's levee line from the Tennessee border to Vicksburg. It will relieve of the menace of floods 500 square miles of rich alluvial lands.

Vicksburg's industrial employees number more than 2,000, and its annual payroll aggregates more than $2,000,000. Recent additions to its industrial community have been hardwood flooring, ice manufacturing, and ice cream plants and dry docks. Contemplated additions are enlarged shops of the Illinois Central Railway Company.

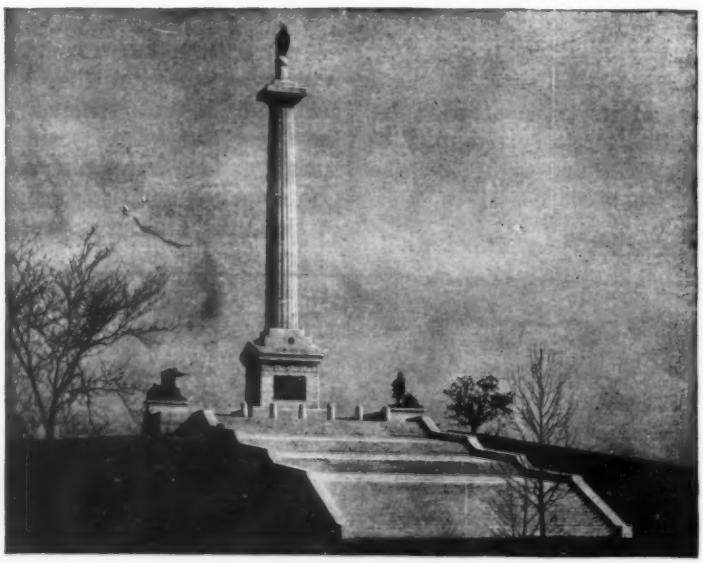


Iowa State Memorial

Picturesquely beautiful and surrounded by a great military park, it has great interest for the tourist.

The Vicksburg National Military Park embracing 1,322 acres, and traversed by thirty-two miles of metalled driveways, is a reproduction of the lines of siege and defense of Vicksburg in 1863. In the park, many hundreds of bronze tablets tell the thrilling story of the siege. It contains many handsome national and State memorials. More than $2,500,000 have been expended in its development.

Vicksburg's hotel facilities are good; there are well conducted, privately operated tourist camps contiguous to it. Short Mississippi River trips may be had to local points of beauty and historic interest; and golfing, fishing, hunting, and boating offer opportunities of out-of-door diversion.



Wisconsin State Memorial

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Medical and Surgical Journal

Established 1844

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NEW DISCOVERY MAY EXPLAIN FOOD-POISONING CASES.

A new food poisoning organism discovered by a micro-biologist of the Bureau of Chemistry, United States Department of Agriculture, may possibly aid in explaining many poisoning cases that could not be attributed to organisms of the common food-poisoning group. Organisms of the latter group—known scientifically as the paratyphoid-enteritidis group—are the only ones hitherto recognized as a cause of intestinal disturbances. The new organism, although it has not been identified as any well-defined species, belongs to another group. In appearance it has much in common with the ordinary lactic types used in the preparation of "starters" for butter and cheese making.

The new organism was first believed to be a source of food poisoning when B. A. Linden of the Bureau of Chemistry found it in a sample of imported cheese held responsible for an outbreak at Biddeford, Me., in 1925. Milk cultures of the organism were made and fed to cats in which violent intestinal disturbances were produced within a few hours. The same organism has since been isolated in two other outbreaks, in both of which cheese was the one article of food eaten by all persons affected. Organisms of the old group of food poisoners, so commonly reported to be the cause of food poisoning outbreaks, were not found. In each of these outbreaks the streptococci, the group to which the newly found organism belongs, were recovered and fed in milk cultures to cats with results like the first trials.

So far no sickness has been produced in experimental tests except when milk was used as a culture medium. The organism will grow and multiply on meat and other media, however, and this may possibly leave many avenues open for contaminating human food.

PHILOSOPHY OF LIFE.

Under this caption an advertisement the other day set forth these views of life:

"Did it ever occur to you that a man's life is full of crosses and temptations? He comes into the world without his consent, and goes out against his will, and the trip between is exceedingly rocky. The rule of contraries is one of the features of this trip.

"When he is little, the big girls kiss him; when he is big, the little girls kiss him. If he is poor, he is a bad manager, if he is rich, he is dishonest. If he needs credit, he can't get it; if he is prosperous, everybody wants to do him a favor.

"If he is in politics, it is for graft; if he is out of politics, he is no good to his country. If he doesn't give to charity he is a stingy cuss; if he does, it is for show.

If he is actively religious, he is a hypocrite; if he takes no interest in religion, he is a hardened sinner.

"If he gives affection, he is a soft specimen; if he cares for none, he is cold-blooded. If he dies young, there is a great future for him; if he arrives at an old age, he missed his calling."

We may add the following thoughts:

If he goes to the Medical Convention, he will be neglecting work at home; if he stays at home to attend to his work, he is making no attempt to progress in his profession. At the convention if he merely votes or listens to a paper, he is "letting George do it"; if he takes an active part in order to help the organization, then he is of the clique and wants to run everything.

If a moral must be had, the one to be drawn is that you can not please everybody so put your shoulder to the wheel and do your best as you see it. But in any event, *go to Vicksburg for the meeting of the Mississippi State Medical Association, May* 10-12.

Dr. Charles Thom, in charge of microbiological work for the Bureau of Chemistry, regards the discovery of this organism as the most outstanding achievement of the year in his field of investigation. He further suggests that while there is no danger from this source of poisoning it does offer another forceful argument for the pasteurization of milk before using it in manufacturing dairy products.

A TRIAD

The Royal College of Surgeons; The Lister Centenary; Dr. Rudolph Matas.

Recently, the whole medical world has been illuminated by the brilliancy of the Lister Centenary, held in London, April 5th-7th, by the Royal College of Surgeons.

Towards the close of this festival—probably the most notable convocation in all its eventful existence—the College further distinguished the occasion by conferring upon Dr. Rudolph Matas its priceless token of appreciation—Honorary Fellowship.

To quote from the presidential address of Sir Wm. MacCormac, at the College's centennial in 1900: "Honorary Fellowship is the greatest distinction it is in our power to bestow, and we regard it as the highest purely surgical qualification obtainable in this country."

It is with great pride, therefore, that the *Journal* echoes our city's unanimous opinion that never before, in all its proud history, has the Royal College of Surgeons of England numbered among its Apostles a loftier spirit and a nobler name than that of this distinguished Louisianian—for so many glorious years, a Peer of the Realm of International Surgery.

* * *

On March 22, 1800, under charter of George III, the Royal College of Surgeons in England was established, slighty changing its title, in 1843, to that of its present form—*the Royal College of Surgeons of England.* It would be unfair to the ancient and honorable record of this illustrious body to omit mention that its roots strike deep into the England of antiquity—various Guilds, Fraternities and Companies weaving themselves, through various patterns of development, into the enduring fabric of today. Hosts of glittering surgical stars shine through the nebulous organizations of remote and later times; but in 1745, the surgeons completely severed themselves from their somewhat heterogeneous associates and formed a company strictly their own. Doubtless it bore a strong resemblance to its descendant of 1800, which still upholds its venerated traditions and maintains its lofty standards.

* * *

Joseph Lister became a member of the R. C. S. in 1852, shortly after acquiring his M. B. from London University College. His epochal papers (1865; 1867) introduced antisepsis into surgical practice, and he

is popularly known as "The Father of Modern Surgery." That he has other manifold claims upon fame is again revealed through the themes of the eminent speakers who graced the Centenary program: "Lister as a physiologist" (Sir Chas. Sherrington); "Lister as a pathologist" (Prof. W. Bulloch); "Lister as a surgeon" (Sir Berkeley Moynihan). Truly royal receptions, imposing religious ceremonies, authoritative professional discussions, were blended into one of the grandest memorial services known to medical history. How could it have been otherwise? Even throughout life, Lister found his pathway strewn with well deserved, if unsought, honors. "His very presence was a spiritual force. That such a man... should rise to lofty heights and achieve great things was inevitable." "Geographically", Lister's career has been thus divided: "A youthful period in Edinburgh (1854-6); Professor of Surgery in Glasgow (1860-69); Professor of Clinical Surgery in Edinburgh (1869-77); the same chair in King's College, London (1877-93). At 66, retiring from active teaching, he was made emeritus Professor of Surgery and Consulting Surgeon to the College Hospital. He was the first medical man to be "elevated" to the British peerage; the second surgeon to be made president of that purely scientific body, the Royal Society. These and numberless distinctions were accorded the man, whose own simple nature and noble heart had ever lifted him above such worldly ambitions. Probably of all his titles he would have loved best that bestowed by Dr. Matas in his eloquent address as retiring president of the A. C. S.: "The greatest benefactor which the science of surgery has given to mankind."

Aged 85, Lister passed beyond the range of earthly sight; but, whose ghostly vision is so dull that it fails to see that luminous soul still lighting the way to continued surgical advancement?

Westminster Abbey has enshrined Lord Lister among the "greatest scientists of the age" in a marble medallion of such transcendent beauty that even a printed reproduction clearly reveals his spiritual loveliness. His mortal remains, however, lie, as he had requested, in West Hempstead cemetery, beside his adored wife, Agnes, daughter of Professor James Syme, the beloved teacher of Joseph Lister's blessed "youthful period."

So it is of the Lister Centenary that we love best to think as one great gathering of the Masters of Surgery, past and present, all participating in unbroken and perpetual fellowship. What a soul-stirring antiphon that must have been, reverberating throughout Great Britain, as the "Choir Invisible" responded to the Chorus Audible, both chanting hallelujahs of joyous assurance that the benefactions of Surgery are spreading themselves over the face of the earth, even as "the waters cover the sea."

CORRESPONDENCE.

Shreveport, La., March 25th, 1927.

Editor New Orleans Medical and Surgical Journal,
New Orleans, La.

Dear Sir:

We are herewith enclosing report of a case of tularaemia occurring in Caddo Parish. Thought probably you would be interested.

Yours very truly,

T. P. Lloyd, M. D.,
Highland Sanitarium.

REPORT OF THE CASE OF TULARAEMIA OCCURRING IN CADDO PARISH.

This disease has been reported from nearly every state in the union. Three southern states not included in the list are Louisiana, Alabama and Oklahoma. Now Louisiana is to be added to the black list.

It is quite possible that tularaemia is occurring more frequent than in former years, or its recognition is becoming more generally known. It behooves us to bear in mind that some obscure infections, hitherto unrecognized, may be tularaemia. This disease may be transmitted through the bite of the blood sucking wood tick or coming in direct contact with infected animals. A potential wide spread infection is imminent among people who handle rabbits, for the reason that the disease is evidently quite prevalent among

these animals as evidenced by the fact that the patient herein discussed advised me that while hunting at various times in Caddo Parish he has seen numerous dead rabbits which died of no apparent cause.

G. L. T.—A white man, age 46—while hunting in Caddo Parish about December 15th, 1926, killed a cotton tail rabbit. On reaching home in the afternoon he cleaned and dressed this animal and while doing so punctured the palmar surface of his right thumb with a spicule of bone. Within three or four days the wound became quite sore and inflamed, assumed the characteristics of an ulcer and did not compppletely heal for six weeks. Coincidently there appeared a lymphangitic redness which rapidly extended to the nodes in the axilla. With the onset of this infection he had a severe chill followed by temperature 104, profound prostration, nausea, vomiting, universal body pain and sweating. This acute stage lasted one week during which time he was compelled to remain in bed. Though the high temperature only lasted two or three days, the afternoon temperature remained 101 for ten days. His fever did not entirely leave for two months, the afternoon temperature being 99 to 100 during this period. All the while he was greatly prostrated and was able to be up and about only a part of the day. Even at this time he is unable to do a full day's work and only attempts to put in half time. His chief complaint now is weakness and fatiguability. The lymphatic glands of the right axilla were first involved, five days after original infection, followed by the epitrochlear right and left, both of these becoming quite large. Later the lymphatic glands of both inguinal regions became slightly enlarged and moderately painful on pressure. Only one of the lymphatic glands went to suppuration, this in the right axillary region, which was incised on February 13th, 1927; it contained thick creamy pus, part of which was injected into the peritoneal cavity of a guinea pig on two occasions, with no effect on the pig.

About seven days from the onset of the original infection, a papular eruption of the erythema nodosum type appeared on the dorsal and palmar surfaces of the right hand and wrist, followed in a few days by a similar eruption on the dorsal surface of the left hand. These nodules were hard, endurated and painful. They contained no pus and persisted for three or four weeks, during this period disappearing and returning on three or four occasions. On disappearance of these nodules there were remaining ecchymotic spots which did not entirely disappear for eight weeks.

During the acute illness of this patient, unfortunately there was no blood study made but most cases reported show a marked leukocytosis during this period. On February 18th, 1927, his red blood count was 4,000,000; white blood count 5,750; hemoglobin 80%; differential not remarkable; urine and Wassermann being negative.

Suspecting this to be a case of tularaemia, we forwarded on February 12th, 1927, some of the patient's blood serum to Dr. Edward Francis of the United States Public Health Service, Washington, D. C. His report on this serum was received a few days later, which is as follows:

"Serum forwarded with your letter of February 12th, arrived February 15th and was found to agglutinate bacterium tularense in dilutions of 1:10, 20, 40, 80, and 160, but not in higher dilutions, thus confirming your diagnosis of tularaemia."

In an article by Dr. Edward Francis, appearing in the Journal of the A. M. A., May 1st, 1926, he states that the same disease also is endemic in certain provinces of Japan and is called (O'Hara's disease).

To verify the diagnosis of any suspected case of tularaemia patient's blood serum should be sent to Dr. Edward Francis, who will make the necessary examinations and promptly report. It is not known at this time just how long tularaemia blood serum retains the power of agglutination.

One specimen sent to him by Dr. W. S. Kerlin of this place received a positive diagnosis, four years after patient had been bitten by a tick.

United States Public Health Service.
Washington, D. C., February 16, 1927.

Dr. T. P. Lloyd,
Highland Clinic,
Shreveport, Louisiana.

Dear Doctor Lloyd:

Serum forwarded with your letter of Feb. 12th arrived February 15th and was found to agglutinate bacterium tularense in dilutions of 1:10, 20, 40, 80 and 160, but not in higher dilutions, thus confirming your diagnosis of tularaemia.

I congratulate you on the diagnosis.

The pig inoculated intraperitoneally with 0.4 c.c. pus taken two months after the onset of the disease will probably die, but not due to the tularaemia infection. We have never been able to infect pigs with material taken from a patient after the first month of illness. I should like to have your report on this experiment.

Dr. W. S. Kerlin sent me a serum January 31, 1927, positive for tularaemia, taken from a patient who had his attack in July, 1923. These two are the first cases from Louisiana.

We are ready at all times to test serums.

Very truly yours,

EDWARD FRANCIS,
Surgeon.

TRANSACTIONS OF ORLEANS PARISH MEDICAL SOCIETY

During the month of April the Board of Directors has held one regular meeting, and the Society has held one Quarterly Executive Meeting and one special meeting to vote on the revision of the By-Laws.

At the Quarterly Executive Meeting Mr. Marshall Ballard, Editor of the New Orleans Item-Tribune was the speaker of the evening and gave a very interesting talk on the relationship between the Medical Profession and the Press.

The reports of the various special and standing Committees were read.

The following resolutions were adopted on the death of Dr. Edmund Moss and Dr. Philip W. Bohne who died during the past month:

Whereas, By the Will of God, Drs. Edmund Moss and Philip W. Bohne, our Confreres, were taken from among us.

Therefore, be it resolved, That this Society desires to express to the families of Dr. Edmund Moss and Dr. Philip Bohne its regrets and sincere sympathy in their bereavement.

Be it further resolved, That a copy of these resolutions be spread upon the minutes and that a copy thereof be sent to the families of the deceased members.

Rabbi Mendel Silber, Ph. D., M. D., was elected to Honorary Membership in the Society.

Dr. L. W. Alexander and Dr. Edward H. Maurer were elected to Active Membership.

The By-Laws have been completely revised. There is one revision to be made in one article of the Constitution which will be voted on at the next regular meeting.

The Membership of the Society is 485.

REPORT OF TREASURER.

Actual Book Balance, 2/28/27	$4,157.19
Receipts during March:	$2,075.92
	$6,233.11
Expenditures:	$1,190.45
Actual Book Balance:	$5,042.66
Outstanding Checks:	27.00
Bank Balance: 3/31/27	$5,069.66

REPORT OF LIBRARIAN

The second consignment of books from our duplicate collection was sent to the Interns' Library at Charity Hospital on March 15. In this lot there were 122 volumes, making with the ones sent over before, a total of 250. One list of the titles sent, went with the books and one list when signed by the Superintendent, was placed in our file. This work will continue as rapidly as time from the reference work will permit.

Gifts were received during the month from Dr. T. J. Dimitry, (24 books and miscellaneous journals) and the Medical Library Association (3 books and miscellaneous journals).

57 books were added during the month. Of these 13 were received by binding, among which were the additional volumes added in the rebinding of the sets of Oxford Medicine and Oxford Surgery; 1 by subscription, 30 by gift and 13 from the New Orleans Medical and Surgical Journal.

2 sections of the new shelving have been received and installed, 3 sections more will be added during the summer. The shift necessitated by the additional space is in progress. The nine-drawer filing case is en route for delivery in April.

3 bibliographies have been prepared on subjects as follows:

Erythromelalgia

Cowper's gland

Hernia of Tube and Ovary

These lists have been filed for future use.

The Assistant Librarian very much appreciates the honor which the Board of Directors bestows in naming her the representative of this Library, and sending her to the Medical Library Association in May. She wishes to assure the Board that she will do her best to prove worthy of this honor, and to avail herself of every advantage offered by attendance at this meeting, for the advancement of this Library.

NEW BOOKS—MARCH.

Quarterly Cumulative Index. 1926.

Amer. Assn. of Dental Schools—Proceedings 1926-27.

International Congress of Ophthalmology—Papers. 1922.

Amer. College of Surgeons—List of fellows, 1921-22, 1926.

A. M. A. Section of Ophthalmology. 1917, 1921-25.

Cullen—Accessory lobes of the liver. 1925.

Barton—Symptom Diagnosis. 1927.

Wilder—Primer for diabetic patients. 1927.

Graham—Pathology and Treatment of Diabetes Mellitus. 1926.

Cooper—Histology of the more important human endocrine glands. 1925.

Henry Ford Hospital—Collected papers. 1926.

Cope—Treatment of the Acute Abdomen. 1926.

Palfrey—Specialties in general practice. 1927.

Nutting—Sound economic basis for schools of nursing. 1926.

Feinblatt—Transfusion of blood. 1926.

Amer. Assn. of Medical Milk Commissioners. Proceedings. 1926.

Radley—Business of operations. 1927.

Tarnowsky—Emergency Surgery. 1926.

Eagleton—Cavernous sinus thrombophlebitis.

H. THEODORE SIMON, M. D.,
Secretary.

CHAILLE ORATION.

The first Stanford E. Chaillé Oration, held under the auspices of the Orleans Parish Medical Society is published on page 800 of this issue. In connection with it are to be found the remarks by Dr. Ernest Lewis and Dr. Rudolph Matas, concerning Dr. Chaillé.

CORRECTION.

Through a typographical error, the title of Dr. W. J. Otis' case presented at the Joint Clinical Meeting of the Orleans Parish Medical Society and the Charity Hospital Staff was headed as Marcolepsy, instead of Narcolepsy.

INTERNAL REMEDIES USELESS AGAINST EXTERNAL PARASITES.

In the quest for simple means of repelling or destroying external parasites of animals many laymen have come to put false faith in claims for internal remedies. So numerous and usually so worthless have the claims been, when subjected to scientific test, that the Bureau of Animal Industry, United States Department of Agriculture has issued a statement entitled, "Inefficiency of Substances Fed to Animals to Repel or Destroy External Parasites."

About 25 years ago the bureau carried out experiments in feeding sulphur to cattle or giving them water with sulphur or sulphur compound to ascertain whether such procedure had any effect on external parasites. No effect was ever observed. Similar tests were tried with sheep as far back as 1903 to ascertain any effect on sheep scab. The investigators found that internal remedies were useless.

At various times the bureau has received claims that certain drugs given to animals internally will protect the animals from flies. The Bureau of Entomology likewise has tested products recommended for chickens, in their feed or drinking water, to control lice, mites, and other parasites. The results of such tests have been uniformly negative.

In view of the many dips and other effective preparations that will control external parasites when applied to animals externally, much cruelty may be avoided and best results obtained at least cost by using only tested and proved methods. The general rule is: External remedies for external parasites, and internal remedies under proper prescription and use for internal parasites, most of which are worms. In the use of chemicals and drugs it is best to obtain the services of a trained veterinarian or other person having scientific knowledge of the products used.

LOUISIANA STATE MEDICAL SOCIETY NEWS

H. Theodore Simon, M. D., Associate Editor.

SIXTH DISTRICT MEDICAL SOCIETY.

Some sixty physicians were present at the meeting of the Sixth District Medical Society at the Baton Rouge General Hospital April 13. Dr. A. G. Maylie was elected President and Dr. T. C. Paulsen of Baton Rouge was re-elected Secretary-Treasurer.

After an interesting program the doctors were guests at a dinner given by the Board of Directors. Bogalusa was chosen as the next place of meeting. The program in full was as follows:

Invocation by Dr. B. P. Taylor, pastor of the First Methodist Church of Baton Rouge; Address of Welcome, by Mrs. J. A. Carruthers, Vice-President of the board of directors of Baton Rouge General Hospital; followed by the reading of the minutes, report of committees, report of the Secretary-Treasurer; consideration of unfinished business, new business, and election of officers.

The following were elected vice-presidents: Ascension, Dr. A. W. Martin; East Baton Rouge, Dr. T. J. McHugh; East Feliciana, Dr. E. M. Toler; Iberville, Dr. B. O. LeBlanc; Livingston, Dr. J. A Thorn; Pointe Coupee, Dr. M. O. Becnel; St. Helena, Dr. H. A. Tynes; St. Tammany, Dr. S. R. Young; Tangipahoa, Dr. Lucius McGehee; Washington, Dr. J. H. Slaughter; West Baton Rouge, Dr. J. A. St. Dizier; West Feliciana, Dr. A. F. Barrow.

The scientific program followed:

"Dislocations of the Semilunar Bones," by Dr. Emmett L. Irwin, New Orleans; "Transfusion in the Treatment of Alimentary Anemia in Children," by Dr. Cecil Lorio, Baton Rouge; "Chronic Middle Ear Suppuration Stimulating Eczema of the External Auditory Canal," by Dr. Rufus Jackson, Baton Rouge; "Points on Nervous and Mental Diseases," by Dr. C. P. May, Clinical Director, East Louisiana State Hospital, Jackson; and a motion picture, "How Biologicals are Made," shown by Dr. M. F. Wilson, of Parke-Davis & Company, New Orleans.

The physicians had dinner at 1 o'clock, and at 2 o'clock inspected the Baton Rouge General Hospital.

At the March meeting of the Natchitoches Parish Medical Society, a moving picture was presented by Dr. M. F. Wilson of New Orleans. Dr. Wilson has charge of the department of experimental medicine of Parke, Davis & Co. His subject was, "How Biologicals are Made."

Dr. Oscar Dowling also made an interesting address before the society and invited the members to visit the health cars of the State Board of Health which are touring the state and happened to be in Natchitoches on that day.

The St. Tammany Parish Medical Society met in regular monthly session on Friday, April 8th, in the parlors of the Southern Hotel in Covington, with the following members present: Doctors C. F. Farmer, President, and in the chair; H. D. Bulloch, Secretary-Treasurer; F. F. Young, L. R. Young, N. M. Hebert, F. R. Singleton, W. L. Stevenson, J. F. Buquoi, H. E. Gautreaux, J. K. Griffith and A. G. Maylie, with Dr. H. W. Kostmayer of New Orleans as the guest of honor and essayist.

Dr. Kostmayer addressed the meeting relative to "Non-Surgical Gynecological Procedures," which proved to be a most interesting and instructive talk. Dr. Kostmayer was made honorary member of the society.

The next meeting of the society will be at Mandeville on Friday, May 13th, 1927.

St. Martin Parish Medical Society has elected the following officers for 1927:

President, Dr. S. D. Yongue, Breaux Bridge; Vice-President, Dr. M. Boudreau, Breaux Bridge; Secretary-Treasurer, Dr. P. H. Fleming, St. Martinville; Delegate, Dr. P. H. Fleming, St. Martinville; Alternate, Dr. J. L. Beyt, St. Martinville.

The 1927 officers of the Vermilion Parish Medical Society are:

President, Dr. G. L. Gardiner, Gueydan, La.; Vice-President, Dr. A. A. Comeaux, Abbeville; Secretary-Treasurer, Dr. Thomas Latiolais, Kaplan; Delegate, Dr. Leo Sparorita, Kaplan.

The Bi-Parish Medical Society met in Clinton, La., February 2nd. An instructive and interesting paper was read by Dr. M. R. Freeman of the East Louisiana State Hospital on "Acute Gastro-Enteritis," discussed by members present. Dr. C. S. Miller of the East Louisiana State Hospital read instructive articles from The Journal of the American Medical Association.

At our next meeting, which will be with the Superintendent and Staff of the East Louisiana State Hospital, the second Wednesday of April, Dr. J. W. Lea of Jackson will read from the Journal of the Louisiana State Society and Dr.

C. P. May of the East Louisiana State Hospital will read a paper on Endocrines.

At our February meeting an enjoyable dinner was served in the Rest Hotel.

An appointment which we believe will meet the general approval of the public was the commission of Dr. Edmond Landry as a successor to the late Dr. M. F. Morvant. Dr. Landry is well fitted to serve as coroner, and while having his commission only a few days has already had the unpleasant duty of holding three inquests on persons run over and killed by the Southern Pacific Railroad.

Through an invitation extended the Lafourche Valley Medical Society by the Third District Medical Society to attend its quarterly meeting to be held in Morgan City, La., on March 8th, the following motored to the "Teche" city and participated: Ayo, Eroche, Gouaux, Parker, Boulet, T. I. St. Martin, T. B. Pugh, N. W. Pugh and C. S. Roger.

The meeting was held aboard a steamboat which steamed some twelve miles up the Atchafalaya River and in more ways than one was considered a novel one. The scientific part of the program was furnished by the presentation of papers by Drs. Dupuy and LeDoux at New Orleans whose papers created a bit of discussion among the membership.

Following the closing of the business and of the meeting, said Third District Society acted as host to the above mentioned visiting members in the offering of a sumptuous banquet.

The LaSalle Parish Medical Society (Physicians' Improvement and Protective Association) met at Urania March 3rd at 2 p. m.

Vice-President, Dr. J. P. Durham, presiding. The President, Dr. T. M. Butler, absent because of personal illness.

Visiting physicians: Drs. R. O. Simmons, D. C. McBride, M. H. Foster and Marion Capple (Alexandria). S. C. Barrow and C. R. Gowan (Shreveport). I. N. Adams (Selma), and C. W. Patterson (Tullos). Local membership was well represented.

Dr. W. V. Taylor outlined, briefly, the history of the society, the purpose of its organization and the work accomplished in the field of organized medicine, calling attention to the outstanding character and high personnel of the membership. He paid a tribute to high standing and reputation in the state of the honorary membership, particularly eulogizing Dr. I. J. Newton of Monroe and Dr. R. O. Simmons of Alexandria for valuable services rendered organized medicine in Louisiana and in behalf of humanity,—men whose reputations were not locally environed but interstate.

Dr. C. W. Patterson of Tullos was unanimously elected to membership. Upon motion of Dr. R. O. Simmons, seconded by Dr. Taylor, Dr. Kostmayer was elected honorary member amid many very eulogistic remarks by members.

The scientific program consisted in a paper read by Dr. S. C. Barrow of Shreveport, "Radiation in Non-malignant Gynecology." Dr. Barrow was particular in pointing out that there was no conflict between the use of radium and rational surgery. Both having distinct fields of action. Dr. Barrow not only impressed upon his hearers his knowledge of his subject, he threw a flood of light upon the therapeutics and technique of radiology. The paper was well received, was instructive, and entertaining. At its conclusion there was spontaneous and liberal applause, and Dr. Barrow was warmly congratulated.

Dr. D. C. McBride of Alexandria opened the discussion from the standpoint of a radiologist. Dr. R. O. Simmons and Dr. M. H. Foster discussed it from the view point of the surgeon.

Dr. C. R. Gowan exhibited x-ray pictures of pulmonary tuberculosis, showing step by step the reparation process toward recovery and what can be done by almost absolute rest and feeding. These pictures were very instructive and much appreciated.

After adjournment, Dr. O. F. Matthews (host) invited the society and guests to the Domestic Science Building Urania High School, where an elegant lunch was served by the domestic science teacher and her students. After coffee Dr. Foster expressed the appreciation of the doctors for the hospitality shown them.

At the regular meeting of the Rapides Parish Medical Society, held Monday evening, March 7th, at the Baptist Hospital, Alexandria, a scientific program was rendered as follows:

"Metastatic Sarcoma, with report of case and presentation of autopsy specimens," Dr. J. E. Knighton, Shreveport.

"Acidosis," Dr. C. M. Jarrell, Alexandria.

The Baptist Hospital at Alexandria has launched its campaign to raise $100,000. Among the improvements contemplated are the erection of a

new Nurses' Home to cost $50,000 and the increase in the number of hospital beds from 60 to 100.

The regular monthly meeting of the staff of the North Louisiana Sanitarium was held on March 22, 1927. Dinner was served by the Sanitarium, following which the regular meeting and scientific program was rendered.

Report of the hospital work for the month of February was given in detail and the deaths were discussed by the doctors in charge of the cases.

Scientific program was given by Dr. Abramson, who reported a case of fracture of both femurs. He also discussed the subject of treatment of fractures of the femur by use of plaster cast, by skeleton traction and by open reduction. The paper was discussed by Drs. Crain, Potts and Stamper.

The regular monthly staff meeting of Our Lady of the Lake Sanatarium was devoted to a paper by Dr. Nicolle on the Application of Physiotherapeutic Measures in the Treatment of Diseases.

The paper covered the various physiotherapeutic modalities and was freely discussed by the members present.

Dr. Perkins of the East Louisiana Hospital, who was an invited guest, was requested to explain to the society the use of the various hydrotherapy measures used at the hospital for the treatment and control of the patients under his care at the East Louisiana Hospital. Dr. Perkins showed by actual figures that the use of hydrotherapy had materially reduced the use of paraldehyde and other nerve sedatives in the control of patients confined in the institution.

In order to stimulate a better attendance at these staff meetings as well as to interest the country members in the facilities of the completely equipped Class A hospital that we have in our midst, each member of the staff was requested to invite a non-member as his guest at the meeting. This plan worked so well that it was decided to repeat the plan at as many meetings as it was found feasible.

After the meeting adjourned the members and their guests were shown through the department of physical therapy of Our Lady of the Lake and the various pieces of hydropathy, electrotherapy and light therapy apparatus and their uses fully explained.

The Southern Railway System through its District Passenger Agent, Mr. G. C. Robson, announces to the New Orleans doctors attending the American Medical Convention in Washington, D. C., May 16th-20, the following transporation:

For a party of approximately fifteen persons traveling on the same train they would be pleased to provide an extra sleeping car. No other travel would be assigned to this car unless it was absolutely necessary to do so in order to accommodate some passenger that could not be cared for in other cars.

Their train, No. 42, leaving New Orleans 8:30 P. M. daily, arrives Washington 7:05 second morning. This is a very convenient schedule and offers the most attractive route to Washington.

They will be pleased to arrange sleeping car reservations and furnish any further information desired.

Dr. P. Jorda Kahle, of the Graduate School of Medicine of Tulane University of Louisiana, addressed the meeting of the Rapides Parish Medical Society held at Alexandria, La., Monday, April 5th, 1927, on "Cystoscopy for Treatment and Diagnosis."

Dr. H. W. Kostmayer, of the Graduate School of Medicine of Tulane University of Louisiana, addressed the meeting of the St. Tammany Parish Medical Society at Covington, La., Friday, April 8, 1927, on "Some Non-Operative Gynecological Procedures."

Dr. P. Graffagnino has recently been appointed Chief of the Surgical Staff of the French Hospital.

Dr. E. Denegre Martin, Dean of the Graduate School of Medicine of Tulane University of Louisiana, addressed the meeting of the Delta Medical Society at Greenville, Miss., Wednesday, April 13th, 1927, on "Industrial Surgery."

DIED: Dr. Philip W. Bohne, New Orleans, died on March 31, aged 46, after an illness lasting over two years. A specialist in the diseases of children, he received his academic and medical training at Tulane University.

Dr. Bohne was a member of the Hotel Dieu staff, physician for the German Protestant Orphan Asylum and an assistant medical inspector in the New Orleans public schools. He was a member of the Orleans Parish Medical Society, the American Medical Association, and the Phi Kappa Sigma Fraternity.

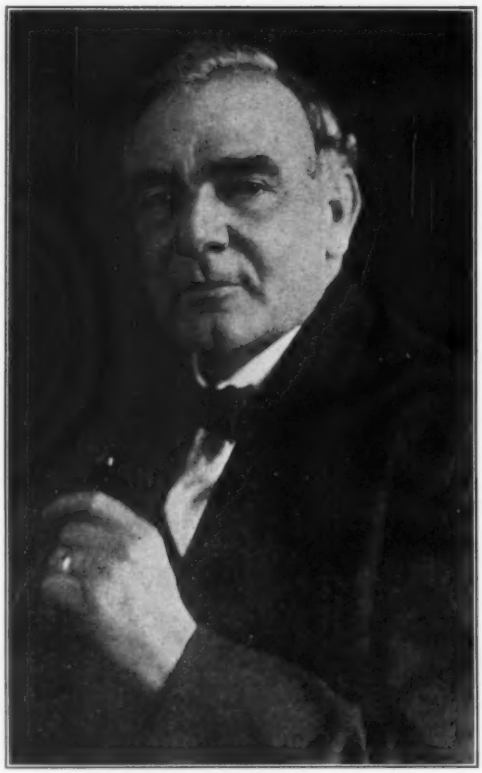
DIED: Dr. Ladislas Lazaro, of Opelousas, La., died in Washington, D. C., on March 30, aged 54, following an operation. Dr. Lazaro had for 14 years served as representative of the Seventh District in Congress. He was dean of the Louisiana delegation in the House. He was ranking Democrat on the House Merchant Marine Committee, and has taken a prominent part in the framing of all legislation in recent years affecting shipping.

He took a leading part in the legislation and other arrangements which led to the authorization of the $16,000,000 Intracostal Canal project, the waterway which is to connect the Mississippi with Galveston and Corpus Christi.

Dr. Lazaro was a graduate of Holy Cross College in New Orleans and Louisville Medical College, Louisville, Ky., beginning his practice at Grande Prairie, La. He was a member of several Medical Associations among which are Louisiana State Medical Society and American Medical Association.

He is survived by his wife, the former Miss May Grunewald, and one daughter, Mrs. Durel Black, of New Orleans.

DIED: Dr. Edmund Moss, head of the medical department of the New Orleans public school system since 1908, died suddenly of a heart attack Tuesday, March 22, at his home in New Orleans. The funeral was held from the residence of his brother-in-law, Benedict M. Grunewald, 2028 Napoleon avenue, the Rev. Robt. S. Coupland, rector of Trinity Episcopal Church, officiating. Interment was in Metairie Cemetery.



DR. LADILAS LAZARO, Opelousas
Congressional Representative, Seventh District, Louisiana

Dr. Moss was born in Bowling Green, Ky., March 22, 1873. He was a graduate of the University of Virginia and of the medical school of Tulane University in 1898. He also did postgraduate work at the University of Virginia.

Besides acting as medical director of the public schools, Dr. Moss was assistant professor of clinical medicine at Tulane University for eighteen years.

Color as an aid to surgery has been given additional recognition as the result of research work conducted by Dr. P. J. Flagg of New York City, and the shade indicated as best adapted to the purpose has been produced by du Pont chemists.

In his efforts to determine the color scheme which was most suitable to the operating room in order to provide the necessary illumination, Dr. Flagg, through the use of the Munsell system of color notation, established the fact that a peculiar bluish green is the scientifically correct complement to blood when exposed to air, which gives the required intensity of color in a room where subdued illumination is important to prevent glare, thereby protecting the eyes of the surgeon.

The new color, or shade, is designated as "eye-rest green." Dr. Flagg advocates the use of deep eyerest green on the floor under the operating table and a shading to a lighter tone as the walls are approached, with the walls fading into a deep cream up to and including the ceiling. Also, it is the opinion of Dr. Flagg that the table, gowns, toweling and draperies used should be of the deepest tint of eyerest green.

Study of the proper color scheme for the operating room, with various recommendations, has been made by Dr. H. M. Sherman, of California; Dr. Alexis Carrel, of the Rockefeller Foundation; Dr. Corwin, of Colorado; Dr. Virchow and Dr. Kroenif, of Germany, and others. Dr. Flagg's findings are the latest contribution to the subject and have met with considerable favor in professional circles.

The Medical Association of Georgia co-operated with the United States Public Health Service in giving diphtheria toxin-antitoxin to more than 25,000 school children within the last two months of 1926. In at least one militia district in the state every child under 10 years of age was immunized.

Experiments recently made by physicians seem to prove that, if a nursing mother has plenty of direct sunlight or is treated by artificial violet rays, she will be able to give her baby what is needed to prevent rickets and also escape for herself the breaking down of the teeth which so often follows the bearing and nursing of children. Other experiments have shown that the rickets-preventing vitamin A is associated with the green color of the vegetables in which it occurs, so that the ordinary garden variety of lettuce is a far better source of energy than head lettuce.

Until the beginning of this year no child born out of wedlock in Great Britain could be later legitimated by the marriage of the parents. On January 1, 1927, an act came into force making this possible, except in cases where either parent was married to a third person at the time the child was born. Legitimation dates only from the time the act came into force even though the marriage occurred earlier. Legitimated children are to have the same rights of inheritance as children born in wedlock, and they have the right to have their births reregistered.

Physicians and nurses in the public service of Italy are traveling throughout the country giving instruction in infant care, child hygiene, care of the sick, and domestic science.

That all babies have a right to their "place in the sun" in order to be assured of normal growth, and that sunlight has the same health-giving qualities on the city fire escape as at the seashore is the message conveyed to mothers in the new one-reel film "Sun-Babies" which has just been produced by the Children's Bureau of the U. S. Department of Labor for use throughout the country.

This picture, which takes about a quarter of an hour in showing, illustrates some of the results of the rickets study made by the bureau in the New Haven clinic, in co-operation with the Department of Pediatrics of the Yale School of Medicine. In a simple and convincing series of pictures of actual cases studied in the clinic, the film gives a striking portrayal of the disastrous results of lack of sunlight and the marked improvement noted after several months of "taking the sun." Other scenes show how the average mother, whether she live in a city apartment, a suburban home, or on a farm, can give her baby the sun baths which are so important a factor in the prevention and cure of rickets.

A great many babies have traces of the disease and will develop severe rickets unless something is done to prevent it, the bureau says. Prevention and cure are the same—more sunlight for babies!

In an attractive series of baby pictures the film shows that no baby need be sun-starved, for the fire escape, the back porch, or the sunny back yard all are good for sun baths.

"Sun-Babies" will be loaned by the Children's Bureau to responsible persons and agencies with the understanding that the borrower will defray express charges back and forth and guarantee the safe-keeping of the film. Those who desire to purchase the film may also apply to the bureau for information and prices.

The Japanese Festival of Dolls, celebrated on March 3 included thousands of doll "messengers of friendship" sent by children in public and church schools of this country. Each doll has a tiny "passport" giving its name and the name and address of the child or group by whom it was dressed, and a message written by the children themselves. This festival in honor of home training and household ideals lasts for three days, and the treasured family dolls are brought out from the family storehouses. The dolls from America were received by a committee from the Japanese department of education, which distributed them in the public schools, but 48 of them already selected to represent the 48 states, were given a place in the Imperial Museum at Tokio.

It has long been held that civilization has an ill effect upon the physical condition of primitive peoples, but an examination of the teeth of over 6,000 Bantu children living in Kraal villages of of them were free from dental defects, while fully 45 per cent had at least mild physical defects due chiefly to malnutrition.

Wisconsin sends out a traveling children's clinic called the "Child's Welfare Special," which visits rural communities remote from cities and hos-

pitals. During the past five years this "Special" has traveled about 30,000 miles, visiting 70 counties of the state and examining 23,579 children. Most of the children were infants or of preschool age, and more than three-fourths of them were found to have preventable or remediable defects. The doctor and nurse of the "Special" give no medical treatment but provide the parents with records of the physical difficulties of their children and suggest that they be taken to the family doctor. This traveling clinic is very popular, and many requests are received from parents, teachers, and local officials for its return.

New Haven, Conn., seems to have found a pleasant and effective way to spread the gospel of diphtheria prevention. The health officer sends to each baby in the city on his first birthday a pretty birthday card, with a letter to the parents calling attention to the importance of protecting the child against diphtheria. The city reported but one death from the disease during 1926.

In this connection, the Metropolitan Life Insurance Company reports for the year 1926 a new low death rate for diphtheria among its policyholders. It asserts that there is no good reason why the mortality from this scourge of childhood should not continue to decrease until it becomes negligible.

About 16 years ago physicians in this country began the general practice of dropping a medicinal solution in the eyes of new-born babies in order to prevent ophthalmia neonatorum, or blindness resulting from eye infection at birth. The treatment is proving effective, for while 25 years ago one of every three children in the schools for the blind in the United States was blind from this cause, in 1926 the proportion had been reduced to about one out of every ten.

As an indication of the success which may follow special efforts by the health authorities, Maryland's two state schools for the blind reported not a single pupil admitted in 1925 who was blind from this type of eye infection. The state has made the disease reportable, like diphtheria or smallpox, and its board of health supplies the preventive solution to physicians free of charge.

The New York Maternity Center Association takes care of pregnant women and last year—1926—it was so successful in this work that not a single one of the 2,000 mothers cared for died as the result of childbirth. If this group had shown the same maternal death rate as that for the city in general, 8 or more of the 2,000 would have lost their lives. The association formerly gave care exclusively to poor women, but last year it offered its services to mothers of the professional and salaried classes and nearly 200 such mothers took advantage of them.

Courses for graduate physicians and for midwives on parental and postnatal care were opened in January by the National Bureau of Maternity and Infant Welfare of Italy. Diplomas showing satisfactory completion of the prescribed course will be required of all applicants for positions with institutions or agencies established or subsidized by the bureau.

Rome's municipal government has arranged to remove adenoids free of charge in the case of public-school pupils needing the treatment. It has started a survey to discover all such children, and is undertaking a campaign to familiarize parents with the importance of having adenoids removed.

The Governor of Rome has decreed that special classes for mentally defective children shall be established in that city and be in charge of trained teachers. Pupils who prove delinquent or show no improvement after two years' attendance are to be placed in institutions, provision for which is almost made in the decree.

A National Child-Welfare Conference has recently been held in Japan under the auspices of the Japanese Central Social Work Association. The 350 delegates represented both public and private agencies and came from all parts of the empire. They discussed the problems of certain classes of children in need of special care, the desirability of child-welfare legislation and of subsidies from the Government, and suggested the inclusion of unmarried mothers and deserted wives as beneficiaries of the mothers' pensions proposed for widows and their children in a bill drafted by the present Japanese ministry.

New York has recently organized a crippled children's bureau in its state department of education. This bureau is to maintain a register of all physically handicapped children (not including the deaf and the blind) and to devise a plan of co-operation among children's court judges, county officials, local school authorities, private and public agencies, and parents. On the order of the children's court, the counties are to be chargeable with the cost of the physical care and educa-

tion of such children, but they will be reimbursed by the state for one-half such expenditure if the order is approved by the state commissioner of health.

Before a child can enter public school or kindergarten in Mexico, the Federal Government has ordered that he must be given the Schick test for diphtheria and the Dick test for scarlet fever. Preventive treatment is given in cases of positive reaction, and both tests and treatment are free of charge.

SUMMER CLINICS, CHICAGO MEDICAL SOCIETY.

Announcements and schedules will soon be ready for the 1927 Summer Clinics of the Chicago Medical Society, supported by many of the largest hospitals in the city, among them being the Post Graduate Hospital, Chicago Memorial Hospital, University of Illinois College of Medicine, Cook County Hospital, Michael Reese Hospital, Mercy Hcspital, Presbyterian Hospital, Jackson Park Hospital, St. Luke's Hospital, Ravenswood Hospital, Mount Sinai Hospital, Francis Willard Hospital, West Suburban Hospital, Evangelical Hospital, North Chicago Hospital, Chicago Lying-in Hospital, St. Joseph Hospital, Alexian Brothers Hospital, Laboratory of Surgical Technique, Washington Park Hospital, Jackson Park Hospital, Chicago Municipal Tuberculosis Sanitarium, John B. Murphy Hospital. Several of our large laboratories have also agreed to co-operate with us in this great work.

In 1926 we limited registrations to physicians living in Illinois, but our increased facilities make it possible to accommodate many more than last year. Registrations therefore will be open to physicians from other states and to as many as may be accommodated, in the order of their registrations. Registration fee will be $10 for each two weeks course, payable at time of registration, and a physician may register for only one course of two weeks.

Admission will be by card only, issued by the Chicago Medical Society and no registration card will be issued until registration fee is paid.

The first two weeks course will begin on Monday, June 13th, 1927, at 9 a. m., ending Friday, June 24th.

The second two weeks course will begin on Monday, June 27th, at 9 a. m., ending Friday, July 8th.

This is an excellent opportunity for the medical men of the country to obtain real post graduate work in some of the best hospitals in the world, and from some of the best clinicians found anywhere.

Schedules will be sent to the 10,000 physicians in Illinois, and announcements will be sent to the American Medical Association, and the several state medical journals.

We will probably be unable to accommodate all those desiring this wonderful clinical course, so it behooves physicians to register early if they desire to take advantage of this year's summer clinics. Last year our registrations closed one week after the first announcement.

ASSOCIATE BACTERIOLOGIST (MEDICAL).

Applications for associate bacteriologist (medical) must be on file with the Civil Service Commission at Washington, D. C., not later than May 10.

The examination is to fill a vacancy in the Hygienic Laboratory of the Public Health Service, Washington, D. C., at $3,600 a year, and vacancies occurring in positions requiring similar qualifications, at approximately the same rate of pay.

The duties are to perform independently or with associates or through subordinates, work of major importance in bacteriology.

Competitors will not be required to report for examination at any place, but will be rated on their education, training, and experience; and a thesis or publications on some subject connected with bacteriology, to be filed with the application.

Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the board of U. S. civil-service examiners at the post office or customhouse in any city.

MISSISSIPPI STATE MEDICAL ASSOCIATION NEWS

J. S. Ullman, M. D., Associate Editor.

CONVENTION PROGRAM.

Meeting Place—General Sessions—Junius Ward Johnson Memorial Y. M. C. A., corner Clay and Monroe Streets.

Meeting Place — Eye, Ear, Nose and Throat Section — Assembly Hall, Carnegie Library, corner South and Monroe Streets.

Public Session — Auditorium, Carr Junior High School, Cherry Street.

Invocation — Rev. Geo. H. Thompson, Pastor, Crawford Street Methodist Church.

Address of Welcome on Behalf of the City of Vicksburg — Hon. W. H. Hossley, Mayor.

Address of Welcome on Behalf of the Issaquena-Sharkey-Warren County Medical Society—Dr. Edley H. Jones, President.

Invocation—First General Session — Rev. Gordon M. Reese, Rector, Holy Trinity Episcopal Church.

Scientific and Commercial Exhibits at the Y. M. C. A.

Hotel Reservations may be arranged through Dr. J. A. K. Birchett, Merchants National Bank Building, Vicksburg.

DR. T. E. ROSS, Hattiesburg, Miss.
President, Mississippi State Medical Association.

WOMAN'S AUXILIARY.

Mrs. S. W. Johnston, President, Vicksburg

Tuesday A. M., May 10 1927.

9:00 A. M.....Registration Park Hotel
1:00 P. M.....Executive Board Meeting
Annex Crawford Street Methodist Church,
Corner Crawford and Cherry Streets.
3:30 P. M.....Ride and Tea
Wednesday, May 11, 1927, Library
9:30 A. M.....General Meeting
Invocation.....Mrs. E. F. Howard

Addresses of Welcome:

On Behalf of the Woman's Auxiliary to Issaquena - Sharkey - Warren County Medical Society.....Mrs. I. C. Knox

On Behalf of the City of Vicksburg.....
.....Mrs. M. H. Bell

Response to Addresses of Welcome.....
.....Mrs. E. L. Posey, Jackson

Roll Calls.

Appointment of Committees.

Reports.

Address—Dr. T. E. Ross Hattiesburg

12:00 M.....Adjournment

1:00 P. M.,
Auxiliary Luncheon

5:00 P. M.....Tea
At the Home of
Mrs. Sydney W. Johnston,
1320 Baum Street

Thursday, May 12, 1927

9:30 A. M.....Call to order

Invocation.

Reading of Minutes.

Reports of Committees.

Election of Officers.

Unfinished Business.

Ride through National Military Park.

Theophilus Erskine Ross, the President of the Mississippi State Medical Association, was born in Philadelphia, Neshoba County, Mississippi, February 18, 1864.

He is the son of Robert M. and Susan Spears Ross.

The family moved to Meridian, Mississippi, during the winter of 1868-69, his father dying in September of the latter year. His mother moved back to Neshoba County on a farm in the Sand Town community.

As a small boy he attended school at Forest Dale Academy. His services were soon required on the farm, so that his school days were at an end.

After reaching manhood, he studied medicine in the city of Baltimore, graduating from the College of Physicians and Surgeons (later merged with the University of Maryland), in March, 1888.

He practiced medicine in his home county four years, moving to Hattiesburg in May, 1892, where he has since resided.

On November 8, 1892, he married Miss Dora Mars of Cushtusa, Neshoba County, Mississippi.

There were six children born of this union, five of whom are now living. The eldest, Dr. T. E. Ross, Jr., is now associated with his father in the work at Hattiesburg.

Dr. Ross has actively aided in the building of his home city, and is now associated with many of its most successful business enterprises.

He has served as President of the Board of Directors of the Mississippi Woman's College since the founding of the College.

He is the pioneer of the hospital movement in Hattiesburg, opening a small hospital in March, 1900, which action has now culminated in the building of the new magnificent Methodist Hospital on the site occupied by his old building, the Hattiesburg Hospital.

He is now a member of the Surgical Staff of the new hospital.

Being of a surgical trend of mind, he has given his professional attention, mainly, to industrial and general surgery.

He served the Gulf and Ship Island Railroad, as its Chief Surgeon, twenty-two years, and has served, as Chief Surgeon of the Mississippi Central Railroad, since its construction. He, also, is Surgeon for several of the large industrial plants of Hattiesburg.

He served the State as a member of the State Board of Health from 1908 to 1916. He is Past President of the South Mississippi Medical Society and was elected President of the Mississippi State Medical Association in May 1926.

MISSISSIPPI RADIOLOGICAL ASSOCIATION

On the evening of May 9, at the Y. M. C. A. building, will be held the Annual Program of the Mississippi Radiological Association. A dinner at 7 p. m. will precede the program.

SCIENTIFIC PROGRAM.

Remarks by the President—A .C. Payne, Greenville.

The Physics of X-rays—D. M. Nelson, Ph. D., Clinton.

Roentgenological Diagnosis of Gall Bladder Disease—G. M. Street, Vicksburg.

Additional Discussions—S. H. Hairston, Meridian; Carl Day, Yazoo City.

Deep Therapy—W. W. Crawford, Hattiesburg.
Additional Discussions—R. C. Finley, Greenville; Augustus Street, Vicksburg.

Duodenal Pathology, Distal to the Bulb—W. F. Henderson, New Orleans.

Additional Discussions—M. W. Rainold, Gulfport; J. G. Gardner, Columbia.

The Present Status of Radium—W. H. Anderson, Booneville.

Additional Discussions—J. P. Wall, Jackson; J. W. Barksdale, Jackson.

An X-ray Study of the Chest—E. D. Kemp, Sanatorium.

Additional Discussions — Marcus Beekman, Natchez; Maury McRea, Corinth.

The Damage Suit Problem—G. E. Adkins, Jackson.

Additional Discussions—J. H. Rush, Meridian; W. A. Dearman, Gulfport.

Round Table Discussion of all subjects.

Those having assigned subjects are limited to ten minutes each, others five minutes each.

Business session.

Election of officers.

Adjournment.

The following is a letter from the President of the Auxiliary to the Issaquena-Sharkey-Warren County Medical Society:

Dr. J. S. Ullman,
Associate Editor of N. O. M. & S. J.,
Natchez, Miss.

Dear Dr. Ullman:

On behalf of the ladies of the Auxiliary to the Issaquena-Sharkey-Warren County Medical Society, I want the wives of the Doctors throughout Mississippi to know with what great delight and eager anticipation we await their arrival as our guests in Vicksburg at the Convention to be held May 10th, 11th, 12th.

We are looking and hoping for a record number of the Doctors' wives even as the Doctors of the Issaquena-Sharkey-Warren County Medical Society plan to entertain the largest number yet attending the M. S. M. A.

We want each Doctor's wife to feel she is especially invited and expected and to know that her place cannot be filled by any other.

It has been Vicksburg's honor and privilege to act host for the M. S. M. A. and the wives of the Association before this time and we realize the great pleasure that is to be ours in May.

Respectfully yours,

(Signed) MRS. I. C. KNOX, President,
Auxiliary to Issaquena-Sharkey-Warren County Medical Society.

PROGRAM.

General Meeting—First Day

Tuesday, May 10, 1927.

Session 9:30 A. M. to 12; 1:30 P. M. to 6 P. M.
Y. M. C. A. Building.
(Clay and Monroe)

OPENING EXERCISES.

1. Call to order. President T. E. Ross, Hattiesburg.

2. Invocation. Rev. Gordon M. Reese, Vicksburg.

3. Report of Committee on Arrangements.

Section on Eye, Ear, Nose, and Throat.
D. C. Montgomery, Greenville, Chairman.

1. Some Recent Advances in Ophthalmic Surgery. Victor Smith, New Orleans. Discussion to be opened by E. L. Posey and B. S. Guyton.

2. Obscure Mastoid Infection in Infants. Arthur M. Alden, St. Louis. Discussion to be opened by L. S. Gaudet and C. A. McWilliams.

Section on Medicine.
S. E. Eason, New Albany, Chairman.

1. Visceral Pain: Its Interpretation and Treatment. T. B. Holloman, Itta Bena. Discussion to be opened by J. C. Culley and C. B. Mitchell.

2. Some Observations on Malaria. Leon S. Lippincott, Vicksburg. Discussion to be opened by M. Beekman and J. B. Black.

3. Political Economy in the Practice of Medicine. James C. Rice, Natchez. Discussion to be opened by W. H. Frizell and C. E. Catchings.

4. In What Way Can the Interest of the General Practitioner Help in the Campaign Against Cancer. Jos. C. Bloodgood, Baltimore. Discussion to be opened by W. W. Crawford and J. W. Gray.

5. Rickets: Diagnosis and Treatment. Joe E. Green, Richton. Discussion to be opened by B. T. Robertson and W. D. Beacham.

6. Physiotherapy. C. L. Barber, Lansing, Michigan. Discussion to be opened by L. B. Austin and A. J. Brown.

7. Syphilis. W. E. Noblin, Yazoo City. Discussion to be opened by P. W. Rowland and W. L. Britt.

8. The Prevention of Pernicious Anemia, and Its Cure by the Minot-Murphy Diet. Dr. Seale Harris, Birmingham, Ala. Discussion to be opened by W. A. Dearman and G. W. F. Rembert.

9. Carbuncle, with Especial Reference to that of the Upper Lip. C. A. Sheely, Gulfport. Discussion to be opened by H. R. Shands and S. H. Hairston.

10. Etiology of Benign Hypertension. Otis S. Warr, Memphis, Tenn.

11. The Management of Benign Hypertension. G. W. F. Rembert, Jackson. Joint discussion to be opened by R. D. Sessions and J. B. Howell.

12. Blastomycetes of the Lung and Mediastinum. O. H. Beck, Greenville. Discussion to be opened by G. W. F. Rembert and L. S. Lippincott.

Evening Session—Eight O'Clock

Tuesday, May 10, 1927.

Carr Junior High School (Cherry Street)

To Which the Public Is Cordially Invited

1. Invocation. Rev. Geo. H. Thompson, Vicksburg.

2. Addresses of Welcome:
On Behalf of the City of Vicksburg—Mayor W. J. Hossley.

On Behalf of the Issaquena-Sharkey-Warren County Medical Society—President Edley H. Jones, Vicksburg.

3. Responses to Addresses of Welcome:
W. H. Anderson, Booneville.

4. Annual Oration—"The Importance of Periodic Examinations as Brought Out in the Follow-up System During Twenty-Five Years Experience in the Prevention of Cancer and Other Diseases, and in the Earlier Recognition of Cancer and Other Diseases." Jos. C. Bloodgood, Baltimore.

5. President's Address: "The Genesis and Development of the Science of Medicine." T. E. Ross, Hattiesburg.

General Meeting—Second Day

Wednesday, May 11, 1927.

Session 9 A. M. to 12:30 P. M.

Y. M. C. A. Building—Clay and Monroe

Section on Hygiene and Public Health

Daniel J. Williams, Gulfport, Chairman

1. The Role of the Private Practitioner in a County Health Program. J. M. Kittrell, Pascagoula. Discussion to be opened by C. M. Shipp and S. B. McIlwain.

2. Control of Contagious Diseases in Children. W. H. Frizell, Brookhaven. Discussion to be opened by J. M. Dampeer and W. E. Noblin.

3. The Control of Tuberculosis in Infants and Children. H. F. Garrison, Jackson. Discussion to be opened by Henry Boswell and D. W. Jones.

4. The Problem of Venereal Disease Control. E. H. Linfield, Gulfport. Discussion to be opened by T. P. Sparks and S. Myers.

5. The Relationship of Mental Deficiency to the Field of General Medicine. H. H. Ramsey, Ellisville. Discussion to be opened by F. J. Underwood and T. F. Willson.

Two O'Clock Wednesday Afternoon.

Y. M. C. A. Building—Clay and Monroe

Periodic Health Examination — A Practical Demonstration. W. A. Dearman, Gulfport, and J. S. Ullman, Natchez.

Section on Eye, Ear, Nose and Throat.
D. C. Montgomery, Greenville, Chairman

Special Session—Assembly Hall Carnegie Library
(South and Monroe Streets)

Wednesday, May 11, 9 A. M. to 1 P. M.

1. Otitis Media. E. Leroy Wilkins, Clarksdale. Discussion to be opened by E. H. Jones and Fern Champenois.

2. The Relative Importance of Glasses. W. A. Stevens, Gulfport. Discussion to be opened by M. H. Bell and W. B. Dobson.

3. The Topical Application of Cocaine to the Nose. E. F. Howard, Vicksburg. Discussion to be opened by L. S. Gaudet and E. LeRoy Wilkins.

4. Injuries of the Orbital Portion of the Optic Nerve. D. H. Anthony, Memphis, Tenn. Discussion to be opened by H. L. Arnold and B. S. Guyton.

5. Dental Cysts. Charles A. McWilliams, Gulfport. Discussion to be opened by Geo. E. Adkins and C. C. Buchanan.

6. Headaches Due to Refractive, Accomodative, and Muscular Anomalies—W. S. Sims, Jackson. Discussion to be opened by E. L. Posey and W. S. Harper.

General Meeting—Third Day.

Thursday, May 12, 1927.

Session 9 A. M. to 12; 1:30 P. M. to 4 P. M.

Y. M. C. A. Building—Clay and Monroe

Section on Surgery

John Darrington, Yazoo City, Chairman

1. Disabilities and Deformities of the Feet. F. H. Hagaman, Jackson. Discussion to be opened by H. R. Shands and J. S. Ullman.

2. Post-operative Massive Collapse of the Lung. J. A. Crisler, Jr., Memphis, Tenn. Discussion to be opened by B. B. Martin and E. H. Galloway.

3. The Management of Patients with Rectal Fistulae. W. E. Sistrunk, Rochester, Minn. Discussion to be opened by J. W. Barksdale and W. L. Britt.

4. The Management of the Hemorrhages of Pregnancy. C. Jeff Miller, New Orleans. Discussion to be opened by J. W. D. Dicks and W. W. Smithson.

5. Intracranial Injury in the Newborn. F. G. Riley, Meridian. Discussion to be opened by N. C. Womack and Geo. H. Spivey.

6. Removal of a Bullet from the Walls of the Heart. Carrol W. Allen, New Orleans and M. L. Flynt, D'Lo. Discussion to be opened by C. T. Chamberlain and C. C. Hightower.

7. Factors of Safety in Surgery of the Biliary Tract. W. H. Parsons, Vicksburg. Discussion to be opened by T. E. Ross, Jr., and J. P. Wall.

8. Thyroidectomy. J. C. Culley, Oxford. Discussion to be opened by H. A. Gamble and W. H. Frizell.

9. A Valuable Post-operative Measure in Serious Cases. Julius Crisler. Discussion to be opened by W. W. Crawford and S. H. Hairston.

10. The Value of Routine Wassermann in Surgical Cases. S. W. Johnston, Vicksburg. Discussion to be opened by H. N. Mayes and V. B. Philpot.

11. Liver Abscess with Case Reports. A. Street, Vicksburg. Discussion to be opened by T. W. Holmes and W. H. Sutherland.

Miss Gladys Eyrich, Supervisor of the Division of Mouth Hygiene, Mississippi State Board of Health, will spend six weeks, June 1st to July 15th at Columbia University making a special study of nutrition as related to Mouth Hygiene.

Doctor T. P. Haney, Jr., a native Mississippian, graduate of A. & M. College, class of 1920, graduate of medical department of University of Virginia, class of 1926, having been engaged in hospital work since the date of his graduation until six months ago when he was sent to the International Health Board training school for health officers at Montgomery, Alabama, has been elected full-time Health Officer of Tishomingo County. Doctor Haney succeeds Doctor F. T.

Carmack as county health officer of that county. Doctor Carmack was one of the most progressive part-time health officers in the state and it was due to his work that a full-time health departmen was established.

Pike, Lincoln, Lauderdale, and Yazoo counties are planning full-time health departments beginning January 1, 1928.

The U. S. Bureau of the Census, represented by Mr. W. H. Lackey, is giving Mississippi the final test on the registration of births and deaths at this time. The test will be concluded about May 15th. Doctor R. N. Whitfield, Director of the Bureau of Vital Statistics, the State Health Officer, and all members of the staff have done their utmost to secure the required 90% registration of births and deaths, and if the state fails in the test it will be the fault of a comparatively few physicians, undertakers, and midwives who have failed in their duty to the state and to their clientele.

The Mississippi State Board of Health will hold the regular annual meeting on Monday, Tuesday, and Wednesday, June 20, 21, 22. Examination of applicants for the practice of medicine will be conducted on the 21st and 22nd.

The regular quarterly meeting of the Homochitto Valley Medical Society was held in Natchez on the afternoon of April 14. The following program was presented:

"Disabilities of the Hip Joint," by Dr. Frank Hagaman, Jackson.

"The Value of Periodic Health Examinations," by Dr. J. W. D. Dicks.

"Tularemia with Case Report," by Dr. J. S. Ullman.

The Society ordered the papers of Dr. Dicks to be published in the local papers of the five counties comprised by this society. The society also ordered conveyed to Dr. B. R. Clark of Lorman its sympathy on the death of his mother, Mrs. M. E. Clark, who also resided in Lorman.

The Clarksdale and Six Counties Medical Society met in Clarksdale, March 24, 1927. The following program was presented:

"Cholecystitis"—Dr. S. D. Robinson, Clarksdale.

"Medical and Surgical Treatment in Prostatic Hypertrophy"—Dr. Russell A. Hennessey, Memphis.

"Method of Procedure in Stomach Cases"—Dr. Henry G. Rudner, Memphis.

"Bronchial Asthma"—Dr. B. S. Guyton, Oxford.

"The Knee Joint"—Dr. Alphonse H. Meyer, Memphis.

"A Short Talk on Surgical Diagnosis"—Dr. John Darrington, Yazoo City.

"The Early Diagnosis of Tuberculosis"—Dr. Henry Boswell, Sanatorium.

"The Life of Louis Pasteur"—Dr. J. Percy Wall, Jackson.

Dr. Harry G. Fridge of Denco, Mississippi, was accidentally killed, March 21, 1927, when his automobile was wrecked against a tree by the road side. He was returning from a call and it was presumed that he had fallen asleep while driving.

Dr. Fridge was born August 4, 1879, and was graduated in medicine from Tulane University of Louisiana in 1904. He practiced in Sanford, Mississippi, for eleven years and served one year in France during the World War. He was a member of the East Mississippi Medical Society, Mississippi State Medical Association, and the American Medical Association. He was a member of the American Legion and a 32nd degree Mason.

The South Mississippi Medical Society has announced that its next meeting will be in Hattiesburg, June 9th.

The new Methodist Hospital has been completed and is now open to patients.

Dr. White of Sarah, Mississippi, has moved to Tate County.

The Staff Meeting of the Vicksburg Sanatarium was held April 9. The following program was presented:

"Cancer of the Stomach"—Dr. A. Street.

"Blood Creatinine Retention in Nephritis"—Dr. G. M. Street.

"Pneumonia Complicating Pregnancy in a Young Woman"—Dr. J. A. K. Birchett, Jr.

"Electrocardiography"—Dr. L. J. Clark.

The regular meeting of the Issaquena-Sharkey-Warren County Medical Society was held April 12, 1927, with the following program:

"Digitalis Therapy"—Dr. L. J. Clark, Vicksburg.

"Backache"—Dr. Thomas P. Sparks, Jackson.

"A Paper"—Dr. Francis Weille, Boston, Massachusetts.

"Discussion—Medical Ethics"—Opened by Dr. E. F. Howard Vicksburg.

Dr. J. A. Neill, formerly of Forest, Mississippi, is now located at 1407 State Line, Waldo, Arkansas.

Dr. R. B. Cunningham of Booneville, Prentiss County, was voted membership in the North East Mississippi Medical Society at its last meeting at Amory. Dr. Cunningham is a 1926 graduate of Tulane and is associated with the Sutherland Clinic at Booneville, Mississippi.

MAY FIRST—CHILD HEALTH DAY.

That state, county, city, and community is wisest which best conserves the health of its children.

Children, well born, well nourished, and well trained, insure the future stability of the Commonwealth. To impress these facts upon the public conscience, our state is annually setting aside May 1st as Child Health Day. The growing interest in Child Health Day is commendable. Each succeeding May Day should be a day of thoughtful planning for the future conservation of child health in the state.

The State Board of Health most hearily approves the observance of May 1st as Child Health Day and earnestly urge that all citizens, all organizations, and all municipalities observe this day by planning constructively for future health and happiness of little children to the end that the opportunity for complete physical, mental, moral and religious development may be the heritage of every child.

For plans and suggestions for a May Day program, write to Mrs. Cliff Davis, State May Day Chairman, Amory, Miss.

The June meeting of the North East Mississippi Medical Society will be held at Corinth out at Shiloh Park, the noted battle ground where the last battle without breast works was fought.

Dr. E. J. Banks of Baldwyn has moved to Jackson, Mississippi, to become a member of the staff at the Insane Hospital. Dr. W. H. Anderson of Booneville has been appointed in his stead as county health officer.

The Program Committee of the Central Medical Society has adopted the plan of having individual counties furnish the entire program for certain meetings of the society. The State Charity Hospital was the general subject when Hinds County presented the program at the March meeting.

"Eye, Ear, Nose, and Throat Services"—Dr. M. L. Batson.

"Genito-Urinary Services"—Dr. P. R. Greaves.
"Pediatric Service"—Dr. N. C. Womack.
"Medical Service"—Dr. G. W. F. Rembert.
"Surgical Service"—Dr. A. E. Gordin.
"Consulting Staff"—Dr. Julius Crisler.
"Hospital, Its Aims and Means"—Dr. S. R. Boykin.

TUPELO HOSPITAL STAFF MEETING.

The Medical Staff of the Tupelo Hospital meeting at its regular time, the second Tuesday night of each month, discussed the deaths and cases of unimprovement that had been discharged from the hospital during the month.

One death due to cirrhosis of liver, following operation. This patient had worked up to within two or three days of going to bed. Following consultation an exploratory operation was performed. On opening up, the liver was found to be enlarged, with white nodules about on the surface.

Another case of gunshot wound of abdomen which took off one-third of the liver.

Another case of stillborn following a foot and cord presentation in a primipara thirty-eight years of age. The cord was pulsating to within one hour before delivery was completed.

The unimproved cases: A male adult, age fifty-four years, was brought to hospital following a mule kick over the cardiac area. Pleural effusion was the diagnosis made, and verified by the x-ray. Following this in about twenty days a greatly hypertrophied heart with pericardial effusion was found.

Another case of neurasthenia in an old lady eighty years of age, was in hospital for a few days because she had no where else to go.

The hospital discharged thirty-seven well. Forty-one improved. Four unimproved. Two deaths within forty-eight hours. One death institutional. In this group we had three labors and three new born. Six consultations. The two deaths were surgical.

Month ending March 31, 1927.

BOOK REVIEWS

Principles and Practice of Oral Surgery: By S. W. Silverman, D. D. S., F. A. C. D. Philadelphia, P. Blakiston's Son & Co. 1926.

In this book the author has contributed a splendid volume to the literature of oral surgery. The subjects are very adequately presented and discussed, both from the surgical and dental points of view. In his work Dr. Silverman has stressed the importance of dependence of the surgeon upon the dentist, and vice versa, in the treatment of oral diseases; and is able to emphasize this in the chapter on fracture of the jaws. The various diseases and malformations affecting this part of the body—from the simplest mucus cyst or dento-alveolar abscess, to the most hopeless malignant growth—are very plainly and masterfully written. His chapter on plastic surgery and cleft lip and palate are very interesting and present several new thoughts on the subjects. The book has been very splendidly closed with a chapter on the training of speech after cleft palate operations—written by G. Hudson Makuen. The only one appreciable, but still not very serious hadicap to the book, is that Dr. Silverman has failed to incorporate a table of contents.

FRANK L. LORIA, M. D.

A Sound Economic Basis for Schools of Nursing and Other Addresses: By Mary Adelaide Nutting, R. N., M. A. New York and London, G. P. Putnam's Sons. 1926.

Medical and nursing literature is enriched and the cause of nursing education advanced by the publication of Miss Nutting's addresses. Among the most noteworthy of the addresses are those entitled, "A Sound Economic Basis for Schools of Nursing," "Some Problems of Training Schools for Nurses," "The Training of Visiting Nurses," "The Social Services of the Visiting Nurse," "The Evalution of Nursing Education from Hospital to University," and "Thirty Years of Progress in Nursing." The book will be of genuine value in presenting to the lay and to the medical public the necessity of sufficient endowments for schools of nursing and of changing the system of nursing education from the medieval apprentice system to the modern university.

FRANCIS M. MUNSON, M. D.

Practice of Preventive Medicine: By J. G. Fitzgerald, M. D., L.L. D., F. R. S. C. 2d ed. St. Louis, C. V. Mosby Co. 1926.

An excellent book for municipal medical officers, school directors, general practitioners, nurses, as well as university professors and their classes.

The grouping and classification of diseases and the arrangement of the matter is logical, but its facilities as a quick reference book would be increased if some of the matter were set in smaller type, leaving the very important data in large print.

The book is full of invaluable statistics, the compiling of which proves the merit of the work.

The latest edition is more condensed and up-to-date. The chapters on communicable diseases are particularly useful, clear and thorough.

In view of the trend of modern medicine more and more towards the institution and adoption of preventive measures every practitioner will find this book a useful addition to his collection.

NARCISSE THIBERGE, M. D.

Experimental Pharmacology as a Basis for Therapeutics: A Text-book for Students and Physicians. By Hans H. Meyer, M. D., and Dr. R. Gottlieb, M. D. 2d ed. in English. Translated by Velyien E. Henderson, from the 7th revised German edition. Philadelphia and Montreal. J. B. Lippincott Company. 1926.

The second English edition of this well-known German text-book makes it available to the English speaking medical world for the first time in some years as the first edition has long been out of print. In it the authors endeavor to explain logically the actions of remedies in health and in disease. The subject is approached from the psychology of each organ and its pathological conditions and an effort is made to show how its functions may be altered by the exhibition of certain remedial agents. The references are ample and will be useful to advanced students of pharmacology and physiology.

FRANCIS M. MUNSON, M. D.

Practical Surgery of the Joseph Price Hospital: By James William Kennedy, M. D., F. A. C. S. Philadelphia, F. A. Davis Co. 1926.

This is a most unusual volume both in style and content. It will be of particular interest to surgeons and gynecologists in this section of the country on account of the advocacy of a number of procedures that we are accustomed to regard as archaic—for example, through and through sutures of the abdominal wall, with silk worm gut, as opposed to their sutures, the use of non-absorbable suture material within the peritoneal cavity, and the performance of vaginal hysterectomy for extensive ulcerations of cervix.

It is not to be thought that the above paragraph summarizes the book. On the contrary, the

general standpoint is up to the most modern teachings. It is more concerned with technique than with physiology, and lays a good deal more emphasis on common sense than on blood chemistry. The mortality in the Joseph Price Hospital is one of the soundest arguments as to the practical nature of the surgeon who inspired this volume. The illustrations are ample and each point is driven home with emphasis and reiteration. The section on vaginal hysterectomy is excellent, the discussions of appendicitis and cholecystitis are of great interest, and the gynecological repair and laparotomy both bear the mark of strong individuality. Draining the gallbladder by gauze packs, flushing the peritoneal cavity with quantities of saline solution, walling off the pelvis with a cofferdam of gauze which is left in place at the completion of the operation, abdominal approach of purulent accumulation in the cul-de-sac, are all practices that need a strong proponent.

It is a little embarassing to discuss the soundness of these princicples unless they have been seen in extenso. The book lacks figures, and if the statements are taken at their face value, much of the work done in surgery is wrong. This is a little difficult to believe, as meritorious technique has a way of diffusing itself throughout the surgical world. However, opposition breeds thought, if it is backed by sincerity, and the book can be recommended for its lucidity and the evident depth of conviction on the part of the author. Instead of "thousands of cases" with a low mortality, one would like to know how many thousands and the percentage of mortality. Other statements of interest are found to be mere statements without proof, but the book is likeable and might be added to advantage to any surgical library.

E. A. FICKLEN, M. D.

Outlines of Common Skin Diseases, Including Eruptive Fevers: By T. Caspar Gilchrist, M. D. Baltimore, The Williams and Wilkins Company. 1927.

The author has revised earlier editions, added a few pages of grouped photographs, modernized treatment and made it possible for the observing student or practitioner to diagnose the common skin diseases by the arrangement as to location and form of lesion. This is a very valuable book for use in making a quick, accurate diagnosis.

M. T. VAN STUDDIFORD, M. D.

Obesity: By Leonard Williams, M. D. London, Oxford University Press. 1926.

"The unlovely condition called corpulence, or obesity, has been divided into three stages, known respectively as the enviable, the comical, and the pitiable. Such a classification is based upon a false estimate of values; for no case of obesity is enviable, most of them are in a sense comical, and all are pitiable." This opening paragraph of the book is indicative of the delightful and very readible form in which the subject matter is presented. The author writes with more than the usual charm of the English writer. Most assuredly American writers would profit much by a greater attention than they exercise to ease of presentation, which after all is style and form. An agreeable literary presentation cannot help but impress the individual reader. The present discussion of obesity is written with a full knowledge of the subject and the scientific aspects of this particular disorder. Valuable hints are given for the correction and amelioration of this discomforting disfigurement of the unfortunate human subject to it. The book is made still more attractive by the illustrations of G. L. Stampa, many of them from London *Punch*.

J. H. MUSSER, M. D.

Collected Papers by the Staff of the Henry Ford Hospital: First Series, 1915-25. New York City, Paul B. Hoeber, Inc. 1926.

This is a very creditable presentation of the literary work emanating from a hospital, which, judging from the character of these papers, is evidently conducted on a well planned basis of scientific efficiency. Some of the articles show well elaborated and thoroughly carried out research work; others bring out new lines of treatment and, all in all, make an interesting volume in which even the most fastidious will find something of interest.

J. A. DANNA, M. D.

Emergency Surgery: the Military Surgery of the World War Adapted to Civil Life: By George De Tarnowsky, M. D., F. A. C. S., D. S. M. Philadephia, Lea & Febiger. 1926.

This is a first edition of a book on emergency surgery by one who has had a large surgical experience and whose personality pervades the entire volume. There is a lot of unnecessary bacteriology and, judging by the number of typographical errors, it was probably hurried off the press. It is, however, well printed and contains a large number of illustrations and has the refreshing distinction of freedom from the old cuts which one sees in all the books on surgery. The author makes a rather successful attempt at adapting the military surgery of the World War to civil life. The book bristles with individuality and though one may not agree with all it contains, it is one which will grace the library of any actively busy surgeon.

J. A. DANNA, M. D.

Practical Materia Medica and Prescription Writing: By Oscar W. Bethea, M. D., Ph. G., F. C. S. 4th rev. ed. Philadelphia, F. A. Davis Co. 1926.

A compact and excellent work, setting forth briefly, but in sufficient detail the essential facts regarding drugs in common use. The second part contains, under heading of prescription writing, very helpful aids towards the proper combinations of said drugs and their compounding.

This work should be a very useful one, not only for the student, but also for the practitioner.

J. HOLMES SMITH, JR., M. D.

Pernicious Anaemia, Leucaemia and Aplastic Anaemia: By J. P. McGowan, M. A., M. D., B. Sc. New York, Paul B. Hoeber, Inc. 1927.

The present monograph is truly a description of one type of disease, despite the somewhat confusing title of the work. It deals almost entirely with the interesting blood disease of the fowl known as leukosis or, as it is more familiarly known in this country, as fowl leukemia.

As a result of three years of investigative work, McGowan is enabled to advance certain ideas and suppositions that certainly make interesting reading, but which seem to require further proof and substantiation than the author presents. Briefly, it is his contention that fowl leukosis represents a single pathological process of multiple etiology and that as a result of this multiple etiology changes are produced in the bone marrow. Alterations in the bone marrow naturally bring up the question of erythrogenesis and the chapter which follows the etiology of leukosis discusses the formation of the red cells and their development. Division of the stem cell takes place amitotically, so in order that the reader may appreciate the importance of amitosis in blood formation, the next division of the book deals with this particular phase of blood formation. Blood platelets are probably also formed from the blood stem cells rather than from megacaryocytes, or at least play an equally important role as to these large cells. It necessarily follows that there is then a discussion in the following chapter of the megacaryocyte and its probable function. The author returns now to his original thesis and begins to prove by his experimental work that fowl leukosis is a definite syndrome and the pathological changes are brought about by disorganization of the bone marrow. If now, one considers pernicious anemia and leukemia and contrasts these two conditions with leukosis, it will be found that they are analogous in many respects and because leukosis is produced by irritative stimulation and degeneration of the marrow, the author assumes that fundamentally there is an identical method of production in human cases, suggesting also the possibility that in an idiopathic pernicious anemia the etiological agent is a previous general infection, in the majority of cases without knowledge of the patient, and at which time the bone marrow had been injured. In the next chapter it is shown that excessive hemolysis is the result of destruction of red cells by the reticulo-endothelial system, cells unsatisfactory for the human circulation as they are of an embryological type. Hemolysis, therefore, does not cause the disease, but is the result of the disease. In aplastic anemia it is the conclusion of the author that the elaboration of iron as a result of some hypothetic toxin is prevented by the injury to the liver cells with the additional added factor of the toxic action on the hemapoietic system. Aplastic anemia and pernicious anemia differ only in the rate of action of the toxic substance.

From this brief outline it may be seen that new ideas and concepts of the pathogenesis of some of the usual types of blood disorders have been advanced. It is hoped that in this review the stimulating character of the book will be indicated by the recounting of the material as presented chronologically.

J. H. MUSSER, M. D.

Histology of the More Important Endocrine Organs at Various Ages: By Eugenia R. A. Cooper, M. D. London, Oxford Univ. Press. 1925.

The aim of the writer to give the normal changes occurring in the more important human endocrine organs (hypophysis, suprarenal, thyroid, parathyroid and thymus) at different periods of life, is admirably accomplished in this little book. While the entire subject matter depicted is of undisputed importance to the histologist, it is evident that it is of equal importance to the pathologist in his interpretation of normal and abnormal findings at various ages. This comprehensive study of the organs, antenatally and postnatally, is also of great value to the clinician since structural changes described with advanced age are presumably correlated with the functional activities of these glands. Therefore, this very interesting work merits a most important place in the ultimate history of the endocrines.

E. DEES MATTINGLY, M. D.

The Treatment of the Acute Abdomen, Operative and Post-Operative: By Zachary Cope, B. A., M. D., M. S., Lond. F. R. C. S. Eng. London, Oxford University Press. 1926.

This volume of 232 pages contains a number of valuable points not only in diagnosis and treat-

ment, but in the details of surgical technique involved in dealing with abdominal emergencies. The illustrations are profuse, and no space is wasted in repetition. Some of the cuts in the opening pages, showing scalpels and dissecting forceps would be more appropriate in a catalogue of surgical instruments, but this is a minor objection which should not cloud the many merits of the publication.

The author has thought it advisable to include points which are so well known as to appear elementary as well as advice on the finer points of surgical judgment. In consequence the latter half of the book is of considerably more interest than the introductory pages.

E. A. FICKLEN, M. D.

The Specialties in General Practice: Compiled by Francis W. Palfrey, M. D. Philadelphia, Saunders Company. 1927.

It is a very excellent idea that has been put into practice by Palfrey in compiling a book in which the minimum essential knowledge of the specialties is collected under one cover. As Palfrey says in the preface, "the total of medical knowledge has become so large that it is beyond the capacity of any one man to have a complete command of the whole in all its branches." In order to supply this knowledge which necessarily the average physician in general practice should have, the authors who have contributed to the several sections have picked out the most important conditions occurring in their specialties and those which it is likely that the general practitoner will treat, and have written upon them from the viewpoint of clinical description, etiology and pathology, methods of recognition of the disease, and treatment and management. In this way, a fairly comprehensive group of facts are marshaled by men who are experts in the particular line and they can be referred to in a minimum amount of time. The reviewer does not feel qualified to comment more than in a general way upon the presentations. To review the book accurately would require the services of a pathologist, neurologist, gynecologist and eight other specialists. However, in looking over the material as it is presented, it would seem that the work is sane, sensible and satisfying.

J. H. MUSSER, M. D.

A Primer for Diabetic Patients: Russell M. Wilder, M. D. 3d ed., reset. Philadelphia, W. B. Saunders Co. 1927.

This book in 6 years has required 10 reprints counting all the resets. It is a very clever, handy, short and clear booklet which can be used by both patient and doctor with advantage.

Simple tests, rapid and easy method of calculating the diet, a practical hygiene are outlined in the first chapters; the second part of the book contains useful recipes and menus and insulin in conservative doses recommended.

The usual tables for calories and other matters of interest mostly to the attending doctor will also be found.

It requires a deep study of the subject and a very wide experience in handling diabetics to produce a book of this character.

NARCISSE F. THIBERGE, M. D.

The Pathology and Treatment of Diabetes Mellitus: By George Graham, M. A., M. D., F. R. C. P. London, Oxford University Press. 1926.

The second edition of this little book is interesting to all engaged in the special field. The subject is covered in a thorough fashion, both from a practical and theoretical standpoint. The recommendations made by the author are sound.

I. I. LEMANN, M. D.

Preventive Medicine and Hygiene: By Milton J. Rosenau and others. 5th ed. New York and London, D. Appleton & Co. 1927.

Rosenau's fifth edition of his well known text book on Preventive Medicine and Hygiene is everything and more than the preceding one was.

As is stated in the preface and confirmed by the text a large number of topics have been rewritten and one on Mental Hygiene has been added. As is to be expected so vast a subject as hygiene cannot be adequately presented by one man, and Rosenau has enlisted the services of a large number of contributors who have handled the new material at their disposal in a masterly manner.

This volume is far too large to review *in extenso.* It is a work of reference, and even a cursory examination of the number of subjects touched upon is enough to convince one that the present edition is bound to render the same service to medical men engaged in public health work as did the preceding ones.

LA. STATE BOARD OF HEALTH.

Health Supervision and Medical Inspection of Schools: By Thomas D. Wood, A. M., M. D., and Hugh Grant Rowell, A. B., M. D. Philadelphia, W. B. Saunders Co. 1927.

The recently published work of Wood and Rowell on "Health Supervision and Medical In-

spection in Schools" is a marvelous accumulation of material on the subject from all parts of the United States. The exceedingly numerous forms for recording special tests on school children are of great value to those whose duty it is to organize and carry on school inspection work. As a volume for reference we do not know of one which approaches it in completeness.

LA. STATE BOARD OF HEALTH.

The Chemical and Physiological Properties of the Internal Secretions: E. C. Dodds, Ph. D., B. Sc., M. B., B. S., and F. Dickens, M. A., Ph. D. London, Oxford Press. 1925.

This book will appeal chiefly to the research workers in physiology and physiological chemistry. The object of the book as stated by the authors in their preface, being to "provide workable descriptions for the preparation and standardization of the products of the internal secretions." The products described are those of the pancreas, pituitary body, thyroid, ovaries and suprarenals. In addition to these, secretin, spermine and the parathyroids are briefly considered. Fortunately, in an appendum to chapter VI, the important work of Collip and his co-workers on the parathyroid hormone has been incorporated. Physicians in general will be mainly interested in the excellent summaries of the physiological actions of the various secretions. These summaries are concise and brief. Where the actions are controversial or insufficiently confirmed it is frankly so stated by the authors. An extensive and careful bibliography is found at the end of each subject. This book should be of considerable value to research workers and endocrinologists and should be an addition to any reference library.

RANDOLPH LYONS, M. D.

Pneumoconiosis: By Henry K. Pancoast, M. D., and Eugene P. Pendergrass, M. D.

This book will prove a very desirable addition to the libraries of all roentgenologists and of physicians who are interested in this subject. The material, which consists in part of twenty-three illustrations of roentgen plates of many types of pneumoconiosis, admirably arranged, and beautifully reproduced. The text contain dissertations upon various kinds of dusts, preventive measures, a clear explanation of the pathology and a comprehensive study of the roentgen ray plates. Of particular interest is the chapter on coincident tuberculosis, explaining why the two conditions are so frequently associated, and methods of differentiating one from the other.

This book is dedicated to Russell D. Carman, "a valued friend, an esteemed contemporary and a roentgenologist of highest ideals."

LEON J. MENVILLE, M. D.

The Normal Child and How to Keep it Normal in Mind and Morals: By B. Sachs, M. D. New York, Paul Hoeber. 1926.

This small volume is intended for teachers, parents and physicians, taking up the training, management and psychology of the infant, the pre-school child the school child and the adolescent. About half of the book is devoted to the evils of psychoanalysis. Throughout the first part of the book there is constant reference to the dangers of psychoanalysis.

Like most books of this kind it is lacking in a detailed and concise discussion of the subject, the generalized flights of lengthy sentences failing to hold the reader's interest.

In the reviewer's opinion the book fails to accomplish what the title suggests and it is not recommended for general use.

L. VON MEYSENBUG, M. D.

Manual of Psychiatry: By Paul E. Bowers, M. S., M. D. Philadelphia, W. B. Saunders Co. 1924.

In the opinion of the reviewer, the author limits the value of his work by stressing brevity, except in that part devoted to the functional mental disorders, which are very comprehensively covered.

FREDERICK L. FENNO, M. D.

PUBLICATIONS RECEIVED.

Oxford University Press: "Chronic Rheumatic Diseases," by F. G. Thomson, M. A., M. D. and R. G. Gordon, M. D. "The Elements of General Zoology," by William J. Dakin.

Paul B. Hoeber, Inc., New York: "The Fifth Avenue Hospital Clinics."

Lea & Febiger, Philadelphia: "A Manual of Materia Medica," by E. Quin Thornton, M. D.

The MacMillan Company, New York: "The Beloved Physician, Sir James MacKenzie," a biography by R. MacNair Wilson.

Medical Life Press, New York: "History of Cardiology," by Louis Faugeres Bishop, M. A., M. D., Sc. D., F. A. C. P.

Miscellaneous: Proceedings of the 19th and 20th Conferences of the American Association of Medical Milk Commissions.

REPRINTS.

"Pigmentation of Roots of Cilia," by Francis Burton Blackmar, M. D., "The Ineffectiveness of Medical Practice Acts," by William C. Woodward, M. D. "The Debatable Fields of Public Health Activity," by E. G. Williams, M. D. "Public Health Problems Needing Research," by Ennion G. Williams, M. D.